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Third Edition

Edited by

Robert W. Ehrich

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Introduction

The inception of this edition goes back to 1981. By that time various contributors to the one of 1965 had been telling me that their versions were sadly out of date and that in many cases new work and new data called for drastic revisions and even complete rewriting of what had previously appeared. Other colleagues who had not been participants kept asking for a new edition. Despite its obsolescence, however, there was still considerable demand for the old one, so when an editor of the University of Chicago Press informed me that a reprinting was under consideration, it seemed necessary to act.

There are some differences between this edition and previous ones. *Relative Chronologies in Old World Archeology* of 1954 was based on a symposium held in Philadelphia at the annual meetings of the American Anthropological Association in 1952, the aim of which was to present and coordinate not-so-easily available information after the disrupted communications and hiatus of World War II and the years following it. The volume's focus on a single basic theme was experimental. At that time, as the title indicates, the evidence was limited to relative and historical data and, since the symposium itself occupied only one day, there were only nine papers.

By 1961 demands for a second edition to include the very considerable work of the intervening years resulted in the publication of 1965, after a review meeting of the authors which was graciously supported by the Wenner-Gren Foundation. During the interim the first efforts to accumulate and apply radiocarbon dates for archaeological purposes had been under way and, since some of the contributions included them, the term "relative" was dropped from the title. That volume contained fifteen papers.

This present edition reflects not only the explosion of archaeological activity in the years since then but also the spate of publication, improved communications between archaeologists and scholars in related fields, and the practice of holding focused symposia of general and specific interest attended by specialists from several countries. By now enough information has accumulated to extend the geographical coverage in an attempt to justify the ambitious title. This time, comprising twenty-nine contributions and an appendix, the volume includes several new areas and divisions of some older ones. Unfortunately an article on Japan could not be completed in time to go to press and has been withdrawn.

In this instance all the articles were invited or volunteered and were prepared without benefit of a symposium or special meeting. Several participants with neighboring interests, however, were in communication with each other and did establish, to a greater or lesser extent, some degree of cooperation. Others were obliged to proceed in relative isolation.

Because of the welter of new material, the number of papers, and the size of the publication, it has been necessary to concentrate on four major objectives: (1) sequences, (2) distributions and relationships, (3) calibrated radiocarbon and relative dates, and (4) pertinent bibliographies and sources. For the most part, therefore, we have had to eliminate or reduce descriptive and cultural data that have no direct bearing on interrelationships or cross-dating relative to the building of chronologies. In many ways this has resulted in more of a guidebook and summary than a compendium.

Like its predecessors, this edition primarily covers the period from the earliest settlements down to a natural breaking point somewhere between 2000 and 1500 B.C. However, depending on exigencies, some chapters begin before the settlement period and some either end earlier than the terminal date or carry the coverage down to relatively recent times. Because of the number of contributions we have tried to keep the articles reasonably short, but in some cases, despite drastic cutting, the authors felt that they could not reduce them further. There is thus considerable variation in length.

It is often difficult to discuss in a cultural or historical vacuum the matters we list as our major objectives, and differences in approach and interpretation as well as stated and implicit disagreements as to origins, relationships and processes such as diffusion, migration, local evolution, change or survival and the like do appear. Since our primary aim is to provide the chronological

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The Chronology of Iran, ca. 8000–2000 B.C.

Mary M. Voigt
Robert H. Dyson, Jr., University Museum, University of Pennsylvania

Outline

Southwestern Lowlands (Khuzistan)
  Deh Luran
  Susiana
  Radiocarbon Evidence
Southwestern Zagros (Fars)
  Radiocarbon Evidence
Southeastern Iran
  Radiocarbon Evidence
Central Western Iran
  Western Luristan
  The High Road and Eastern Luristan
  Radiocarbon Evidence
Central Northern Iran
Northeastern Iran
  Radiocarbon Evidence
Northwestern Iran (Azerbaijan)
  Radiocarbon Evidence

In the 1965 edition of *Chronologies* the chapter on Iran was dependent on a small number of excavations, most of them carried out before 1950 (Dyson 1965). Although many of these were well done for their day, they cannot compare in terms of stratigraphic control and efficiency of recovery to standards established since then. Some parts of Iran were completely unstudied or only partially explored by archaeologists. A chronology for the prehistoric periods in Iran was, therefore, necessarily based for the most part on comparisons with better-known Mesopotamia. Since then, twenty-five years of intensive excavation supplemented by surface surveys and radiocarbon dates have produced reliable regional sequences. Thus it is now possible to construct a chronology of Iran based primarily on internal evidence. This chapter focuses on information acquired since 1950 and does not repeat the material discussed by Dyson in 1965.

Unlike Mesopotamia with its open plains and great river valleys, Iran is a complex geographical area broken up into deserts, mountain valleys, and coastal plains. This diversity of environment led to multiple cultural adaptations in prehistoric times, making cultural generalizations difficult. For this reason, archaeologists working in the area have concentrated on the development of stratified regional sequences before undertaking studies of major time periods as such. In constructing a general chronology for prehistoric Iran we have focused on the regional sequences, linking them through the traditional archaeological method of artifact comparisons.

Broadly speaking, Iran is shaed like a saucer, with two great central deserts encircled by mountains that are in turn bordered by lowland plains such as Khuzistan, Sistan, and Gurgan. During most periods, these lowlands, as well as mountainous border regions such as Azerbaijan and Kurdistan, were in contact with the geographically adjacent areas: Turkmenistan, Afghanistan, Pakistan, Mesopotamia, Anatolia, and the Caucasus. We have, therefore, outlined the relationship between our regions and adjacent sequences reported in this volume.

We emphasize that the length of the discussion of a specific site or phase is not directly proportionate to its

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While writing this chapter we received help from the following scholars who provided comments on earlier drafts and/or unpublished data: Genevieve Dollfus, Elizabeth Henrickson, Robert Henrickson, Frank Hole, C. C. Lamberg-Karlovsky, Louis D. Levine, Richard Meadow, Ezat Negahban, Edith Porada, Martha Prickett, Philip E. L. Smith, William Sumner, Henry Wright, T. Cuyler Young, Jr., and Allen Zagarell. We thank them for their generosity. A special debt is owed to Robert Ehrich, whose patience and editorial suggestions helped us produce a clearer and more economical synthesis.

importance. Some of the most significant sites and chronological units are only briefly discussed due to high-quality description and documentation in readily available publications. Poorly known assemblages on the other hand frequently require extended discussion in order to evaluate ambiguities or conflicting evidence.

This chapter has a strong focus on ceramics, which is a result of three factors. First, after ca. 6500 B.C., pottery is well represented in the archaeological record, and has been described and illustrated even in very brief preliminary reports. Second, ceramic industries generally change more rapidly than other artifact categories. Third, we have in many cases firsthand knowledge of the ceramics derived from the study of the extensive pottery collections from Iran in the University Museum; the generosity of colleagues who showed us unpublished materials in museum collections or in Iran during visits to sites or surveys in progress; and our own research.

Once our relative sequence was completed, we used radiocarbon evidence to establish fixed points in time, providing information on the span of specific chronological units as well as on the rate of change within sequences. This was done by averaging fifteen sets of tightly clustered determinations, spread through eight geographic regions (table 1). With rare exceptions discussed in the text, the grid derived from the averaged samples was compatible with that derived from artifact comparisons.

Table 2 contains a list of all radiocarbon samples from Iranian sites known to us. This list does not exclude determinations "rejected by the excavator," since new data have sometimes resulted in the rehabilitation of dates rejected at an earlier stage of study. We have not attempted to evaluate individual dates. To do so would usually require extensive discussion, often of stratigraphic information that is not yet published in final form.

In describing the stratigraphically-based regional sequences we have chosen to proceed along two major traverses from west to east (fig. 1). The first traverse begins in Khuzistan and moves across the southern half of Iran to its eastern border. The second begins in the central Zagros and proceeds along the northern edge of the great central deserts. The northwestern corner of the country, Azerbaijan, stands alone, often as part of a cultural zone that extends beyond Iran to the north or west. To avoid redundancies, the artifact parallels cited for each regional sequence are usually limited to those that link it to the previously described adjacent region. Thus a reader interested only in one specific regional sequence must also consult the sections on adjacent geographical zones to obtain full documentation of interregional relationships and their chronological implications. A summary of the relationship of regional sequences is presented in figure 2.

Southwestern Lowlands (Khuzistan)

Deh Luran

The Deh Luran Plain Sequence

Deh Luran in the northwest corner of Khuzistan lies on a traditional route between Mesopotamia and the Susiana Plain. The sequence is based on excavations at Tepes Ali Kosh and Sabz by Frank Hole, Kent Flannery, and James Neely (1969; Hole 1977); at Chagha Sefid by Frank Hole (1977); and at Farukhabad by Henry Wright (1981); supplemented by surface survey (Neely 1969; Hole 1987a:figs. 7–8). The first eleven phases (Bus Mordeh to Farukh) are named locally while the remaining periods use Mesopotamian terminology (Uruk to Early Dynastic I/II), and conclude with the Elamite/Shimashki phase defined at Susa (Wright 1981:10, table 2). A unique assemblage known from surface survey, Sargarab, is placed between the Farukh and Early Uruk phases (Wright 1981:168).

A. *The Bus Mordeh phase* represents the earliest settlement in the area and is defined at Tepe Ali Kosh (Hole, Flannery, and Neely 1969:34–40, fig. 9). In assessing its chronological position, the excavators cite general resemblances to highland sites such as Zawi Chemi and Karim Shahir in Iraq and Ganj Dareh and Asiab in Iran (Hole, Flannery, and Neely 1969:333, 345). In a detailed analysis of aceramic Neolithic sites in Mesopotamia and Iran, Howe (1983:120) states that the Bus Mordeh chipped stone industry does indeed resemble that of Karim Shahir "quite closely in typology and morphology as well as in technological caliber." Unfortunately, this does not establish a precise relative date for the Bus Mordeh phase, since such tools were used over a long time span. Considering all of the archaeological evidence, including architecture and floral and faunal remains as well as artifacts, Howe dates the Bus Mordeh phase as "well subsequent to the horizons of Karim Shahir and similar sites and closer to the time and cultural phase of Jarmo" (1983:122). Given the parallels linking the succeeding Ali Kosh phase to lower Jarmo, we would place Bus Mordeh between the Karim Shahir/Zawi Chemi/Asiab/Ganj Dareh E horizon as established by Howe (1983: 111–32), and earliest Jarmo.

B. *The Ali Kosh phase* was defined at Ali Kosh, and also appears at Chagha Sefid (Hole, Flannery, and Neely 1969:40–45, fig. 10; Hole 1977:47–50, figs. 5–8). The chipped stone industry is very similar to that of the preceding phase. Potentially useful for chronology is a single "reamer" of unspecified material (Hole, Flannery, and Neely 1969:fig. 251) which is morphologically similar to steeply retouched obsidian tools found at aceramic Neolithic sites from the Zagros to the Euphrates. These include lower Jarmo (Hole 1983a:241, n. 5 [by L. Braidwood], fig. 122:11, 13–21, table 22); Magzaliya (Bader 1979:pl. 6:3–7, 10); Çayönü (Redman 1982:42–44, figs. 2.14:1–2, 2.15:1–3, pl. 2.II:15–18); Cafer (Cauvin and Aurenche 1982:fig. 10:1, 3–4, 6–7); and Gritille (Voigt 1985:fig. 17s). However, even if the Ali Kosh tool is also of obsidian and has the requisite longitudinal striations, it does not necessarily indicate an early date. This same type also occurs at later, ceramic sites in the Zagros: at Shimshara, where it is most common in levels 12–10 (Mortensen 1970:43, figs. 24d, 25f–h, 29a, e–f, 30–31, 36–37); in upper/ceramic Jarmo (Hole 1983a:table 22); and at Hajji Firuz (Voigt 1983: 236–37, pl. 33, fig. 111n–o).

Better evidence for the contemporaneity of Ali Kosh with the earlier aceramic settlements is provided by the stratigraphic distribution of stone bowls. Vessels with a flat base, flaring sides, and beaded rim are the most popular form in the earliest levels at Jarmo, continuing in much reduced numbers to the end of the sequence (type A; Adams 1983:210, 212–13, fig. 101:1–3, chart 2). In Deh Luran, their initial appearance and greatest popularity is in the Ali Kosh phase, but a substantial number were also found in Mohammad Jaffar contexts (Hole, Flannery, and Neely 1969:107, fig. 42a–k, table 10; two Sabz examples are presumably out of context). Also supporting this dating is the presence of two sherds identified as *vaisselle blanche* in Ali Kosh deposits at Chagha Sefid (Hole 1977:145–47, fig. 55j–k). This distinctive material is characteristic of PPNB and PPNB-related sites in the Levant and Turkey (Mellaart 1975:62; Hours and Copeland 1983). Ties between the Ali Kosh phase and Zagros sites other than Jarmo cannot be established until sites such as Tepe Guran, Ganj Dareh, and Abdul Hosein have been published.

To summarize, the Ali Kosh phase is apparently contemporary with aceramic Neolithic sites in the northern Mesopotamian steppe, and therefore predates the early Hassuna occupation in the latter area at least in part. However, the duration of this phase is not known. Given the evidence for a correlation of the succeeding Mohammad Jaffar phase with early Samarra in Mesopotamia and later Zagros Neolithic sites (see "Central Western Iran"), late Ali Kosh settlements may have been contemporary with the earliest ceramic settlements in these regions. If so, Ali Kosh would be analagous to Shimshara, where an aceramic assemblage apparently coexisted with Early Hassuna settlements in the adjoining lowlands.

C. *The Mohammad Jaffar phase* is defined at Ali Kosh and is also known from Chagha Sefid (Hole 1977:82–86). The excavator considers the material from Chagha Sefid to be somewhat later than that from Tepe Ali Kosh (Hole 1977:31). Chaff-tempered buff pottery sometimes painted in fugitive red (Hole, Flannery, and Neely 1969:114–20, figs. 43–44; Hole 1977:101–3, fig. 37) appears in quantity for the first time. Based on the published material from Khuzistan, only one motif links Mohammad Jaffar with Chogha Mish Archaic 1 (Hole, Flannery, and Neely 1969:fig. 44f; Kantor 1974:fig. 5:"Painted Burnished Ware" 3264). The fabric and vessel forms of Mohammad Jaffar pottery are generally compared with those of ceramic industries found at Zagros sites such as Jarmo, Sarab, and Guran (e.g., Hole, Flannery, and Neely 1969:115–17). Change within the Zagros sequence, however, is most evident in painted design, as well as in a few diagnostic forms (see "Central Western Iran"). The best parallels for Mohammad Jaffar Painted Ware occur in late Zagros Neolithic industries: the Guran Standard Painted Ware of levels J–D at Tepe Guran (Hole 1977:fig. 37a, v; Mortensen 1963:fig. 17g), and the linear style found in Late Sarab and upper Jarmo (see "Mahidasht Sequence"). The Mohammad Jaffar painted style also has parallels with chaff-tempered pottery from Qal'eh Rostam I in the Bakhtiari Mountains (Hole, Flannery, and Neely 1969:fig. 44a–c, f–g; Hole 1977:fig. 37c, e, aa; Nissen and Zagarell 1976:figs. 3:11, 13, 4:10); however the necked jars and elaborate designs of Qaleh Rostam I suggest a later date (see also McDonald 1979:530).

Within the chipped stone industry, geometric microliths, trapezes, and triangles appear first in the Mohammad Jaffar phase in Deh Luran (Hole 1977:fig. 56a–c, tables 37, 42); at Jarmo, four trapezes were found in Op. I:7–8 or lower Jarmo. They are apparently absent in the middle of the sequence and then reappear in large numbers in Op. II or upper Jarmo, with the greatest number in the latest levels (Hole 1983a:237–38, table 22, fig. 112:1–18). More important, however, is a highly distinctive stone artifact called a "phallus" (Hole, Flannery, and Neely 1969:203, pl. 38a, fig. 87a) which connects Mohammad Jaffar A_2 with two Mesopotamian assemblages: level I at Tell es-Sawwan, and latest Jarmo (Wailly and Soof 1965:22, fig. 66, center; Moholy-Nagy 1983:figs. 137:5, 142:32). This unique type supports the ceramic and chipped stone parallels with upper Jarmo and also establishes a link with early Samarra.

To summarize, Mohammad Jaffar is weakly linked to Late Neolithic sites in the Zagros and Samarran sites in Mesopotamia. The succeeding Sefid phase is more strongly linked to the same sites and periods, but in some cases to slightly later levels within the sites (see below). We would therefore place Mohammad Jaffar contemporary with the end of the Zagros Standard Painted Ware tradition and the beginning of the Linear Painted tradition as seen at late Guran, Sarab and Jarmo, and with early Samarra.

D. *The Sefid phase* is defined at Chagha Sefid (Hole 1977:50–59, figs. 9–14). Continuity between Mohammad Jaffar and Sefid, as well as between Sefid and Surkh, is evident in small artifacts such as domed or cuff link–shaped labrets (Hole 1977:table 76) and T-shaped figurines (Hole 1977:table 67).

Ceramic comparisons indicate that Sefid Painted Ware is part of a widespread ceramic horizon, with linkages to the Late Sarab, Archaic Zagheh, and Hajji Firuz periods (Hole 1977:fig. 43; Malek Shahmirzadi 1977b:pls. XI:20–27, XII:levels IX–X). A trade sherd of classic Samarra type from a Sefid context (Hole 1977:138, fig. 51g) establishes a relationship with the Mesopotamian sequence and reinforces the link with Zagros "linear-painted" sites, since rare Samarran sherds also occur in late Hajji Firuz contexts (Voigt 1983:101–2). Two other types have a limited chronological distribution at Chagha Sefid. T-shaped figurines, which initially occur in the Ali Kosh phase, appear in large quantities in the Sefid phase (Hole 1977:229–32, tables 67, 72, fig. 91g–n); in upper Jarmo, where they were called "double-wing-based objects" (Morales 1983:385–86, figs. 164:8–10, 165:2, 4–5, 8–11, 166:5–7); and in the West Mound at Sang-i Chakhmaq in northeastern Iran (Masuda 1974a:fig. 3:10, 12). Nail-shaped objects or "mullers" of stone and clay (Hole 1977:234, fig. 87e–h; table 75, pl. 54b–c) also occur in Mushki period deposits in Fars, associated with small stone and clay "mortars" (Fukai, Horiuchi, and Matsutani 1973:pls. XXXIX:2, LIV:1–24, LV:9–11). Both nails and mortars with a pronounced flange on the base are found across the Iranian Plateau to Central Asia. Sites include Sialk I (Ghirshman 1938:pl. LII:26–31, 37–39, fig. 2), the East Mound at Sang-i Chakhmaq (Masuda 1974a:fig. 4:15, 16), and Djeitun (Masson 1971:pls. XL:1–5, 15, XLI:5–6, 16–17).

Labrets with a domed upper surface are most popular in the Sefid and succeeding Surkh phases, but extend from the Mohammad Jaffar into the Choga Mami Transitional phase (Hole 1977:236, table 76, pl. 54n–r, t–bb, fig. 92o, q–t). Reflecting this wide time span is their occurrence at Tepe Guran (Mortensen 1963:fig. 20c) and Choga Mami (Oates 1969:pl. XXX:b, middle row). Although not reported from sites on the Iranian plateau, they are also found at Djeitun in Turkmenistan (Masson 1971:pls. XXXVII:10, XXXVIII:13).

E. *The Surkh phase* is defined at Chagha Sefid (Hole 1977:59–75, figs. 15–26). The definition of this phase is based on ceramics, specifically on changes in frequencies rather than the occurrence of new types (Hole 1977:34, 107, tables 9–10). The artifacts and architecture of this assemblage are basically continuations from the Sefid phase, and similar parallels apply (Hole 1977:33–34 and above). Within Khuzistan, the Surkh phase is apparently contemporary with Chogha Mish Archaic 1 (see "Eastern Susiana Sequence"). One common Surkh type, the Black-on-Red Ware hemispherical bowl with incurved rim, occurs in Hulailan during the Red Burnished Ware phase and in the Mahidasht during the Late Sarab phase (Hole 1977:125, figs. 41b, 48c–h; Mortensen 1963:fig. 16i; McDonald 1979:fig. 14y). Given the predominance of Khazineh Red Ware in Surkh contexts, a relationship with Latest Guran and/or slightly later sites in the Hulailan Valley such as Sar Arsiaban seems likely (Mortensen 1974b:26, 41). The presence of Sialk Black-on-Red Ware in late Surkh deposits links this portion of the phase to Sialk I^{3-4} (see "Qazvin/Kashan Sequence").

F. *The Chogha Mami Transitional (CMT) phase* is defined at Chagha Sefid (Hole 1977:75–79, figs. 26–29). The pottery begins the hard-fired, grit-tempered buff ware tradition characteristic of later Susiana. It compares closely in technology, shape, and painted designs with that from the type site, Chogha Mami in Mesopotamia (Hole 1977:pls. 34–44, figs. 50, 51a–b, d; Oates 1968:pl. IV; 1969:pls. XXXI:b, XXXII:2–8, 10–12). Within Khuzistan, CMT Ware is also found at Chogha Mish in Archaic 3 as "Close-line Ware" (Kantor 1974:fig. 4) and in Jaffarabad 6 (Dollfus 1983:table 42). Its chronological relationship to the northern and central Mesopotamian sequence is established at Chogha Mami, where it is stratified above Samarran deposits. In the south, the CMT phase is often correlated with Ubaid 1/2 (Porada et al., this vol., chap. 5; Oates 1969:138). However, a limited deep sounding at Tell el-Ouilli near Larsa produced sherds within the range of the CMT industries from Iran, stratified below pottery comparable to that from the lowest level at Eridu (Calvet 1983:pls. I–VII; Safar, Mustafa, and Lloyd 1981:fig. 100).

Ties to the Iranian plateau are provided by imported vessels of Sialk I Black-on-Red Ware (Hole 1977:134–38, figs. 52–53, tables 9–10). Pottery of this type first appears in the Deh Luran sequence during late Surkh and amounts to 4 percent of the sherd sample in the CMT phase (Hole 1977:134–38, figs. 52–53, tables 9–10). Sherds like those at Chagha Sefid were collected from the North Mound at Sialk by Hole (1977:135), and a few are published in the Sialk report. Although Hole assigns the Deh Luran sherds to Sialk I_2, the earliest stylistic parallels documented in the site report are with Sialk I_{3-4} (compare Hole 1977:figs. 52a, 52e, 53f with Ghirshman 1938:pls. XLIV:A:2, XLI:A:11). The designs on thin-walled sherds with fine-line motifs (e.g., Hole 1977:figs. 52d, h, k, 53b, e, g) are comparable to Cheshmeh Ali/Sialk II Ware in the collection of the University Museum (Hole 1977:figs. 52d, h, k, 53g; R. H. Dyson, unpublished notes). Confirmation of the technological as well as stylistic identity of the Chagha Sefid and Cheshmeh Ali sherds has been provided by Dollfus (pers. comm. 1985). Other artifact types that occur in Sialk I_{3-4} and in late Surkh and CMT, as well as in later deposits, are spindle whorls with an ovoid section and short linear incisions around the outer edge (Ghirshman 1938:pl.

LII:19; Hole 1977:217, fig. 87a), and chipped stone hoes with pear-shaped or subrectangular outlines (Ghirshman 1938:pl. LVI:2, 4; Hole 1977:209, pl. 49f–g, j).

The following phases are represented by small artifact samples, and are more completely documented at sites in the Susiana Plain (see below).

G. *The Sabz phase* is defined at Tepe Sabz (Hole, Flannery, and Neely 1969:55–57, figs. 15–16) and also appeared in a very limited test at Chagha Sefid (Hole 1977:79–82, figs. 30–32). Although the ceramic styles are quite distinct, the Sabz phase has been compared to Jaffarabad 6–4, Jowi 17, and Chogha Mish Early Susiana by Dollfus (1983:165, table 42). At present, we have no convincing parallels between Sabz and Ubaid 1 at Eridu (Porada et al., this vol., chap. 5; Oates 1983). Links with the Iranian plateau are also rare, although wide bangles with grooves morphologically similar to those from Tepe Sabz do occur in Sialk I$_{4-5}$ (Ghirshman 1938:pl. LII:15, 22).

H. *The Khazineh phase* is defined at Tepe Sabz (Hole, Flannery, and Neely 1969:57–58, figs. 15–16). It is closely related to Jowi 16–13 and Chogha Mish Middle Susiana 1 in Susiana (Dollfus 1983:165, table 42). Black-on-Buff vessels of this phase are also clearly similar in form and design to pottery from (1) Eridu levels XVI–XV (Hole, Flannery, and Neely 1969:fig. 56d–e; Safar et al. 1981:figs. 90:3, 5, 92:2, 90:5; Hole, Flannery, and Neely 1969:fig. 54c, d–f; Safar et al. 1981:fig. 91:18, 28; Hole, Flannery, and Neely 1969:fig. 56b, d; Safar et al. 1981:figs. 90:20, 91:7, 9, 96:11; Hole, Flannery, and Neely 1969:fig. 57c, f; Safar et al. 1981:figs. 90:24, 91:6); (2) Ras al'Amiya (Hole, Flannery, and Neely 1969:fig. 61a–b; Stronach 1961:pl. XLVII:5; Hole, Flannery, and Neely 1969:fig. 52b; Stronach 1961:pl. XLIV:5; Hole, Flannery, and Neely 1969:figs. 54g, 55b; Stronach 1961:pl. XLIV:3–4; Hole, Flannery, and Neely 1969:figs. 56b, d, 57f; Stronach 1961:pls. XLVIII–XLIX); and (3) Hajji Mohammad (Hole, Flannery, and Neely 1969:fig. 56; Ziegler 1953:pl. 11, 14). Parallels with Halaf pottery from Banahilk and Gawra (Hole, Flannery, and Neely 1969:141, 144) are very general, limited to simple shapes and motifs used over long time spans; examples of the latter are central rosettes or wheels, hatching between opposed scalloped lines and bands of solid diamonds (Hole, Flannery, and Neely 1969:figs. 54g–h, 56b; Tobler 1950:pls. CXI:15; CXIV:38; Watson 1983b:fig. 199:2, 8).

I. *The Mehmeh phase* is defined at Tepe Sabz and also documented in a small test at Musiyan "E" (Hole, Flannery, and Neely 1969:58–61, 65–72, fig. 17). Within Khuzistan, Mehmeh is most closely related stylistically to the Transitional phase at Jowi, levels 12–11, and to Bendebal 28–27; imported Mehmeh Red-on-Red sherds have also been found in Jowi 12 (Dollfus 1983:166, fig. 26:15, table 42). Strong ties with Mesopotamia are also evident. Large carinated bowls with painted interiors of the type generally associated with Hajji Mohammad Ware continue to be abundant in the early part of the Mehmeh phase (Hole, Flannery, and Neely 1969:144). Ledge-rim jars link Mehmeh with Eridu XIII–IX (Safar, Mustafa, and Lloyd 1981:154–56, figs. 84–89). Parallels to Gawra XX–XVI dated to Ubaid 3 include not only forms such as ledge-rim jars, but also painted style (Hole, Flannery, and Neely 1969:fig. 58; Tobler 1950:pl. CXXII). However, the greatest number of comparisons are with Ras al^{c}Amiya. In addition to large carinated "Type 14" painted bowls, which continue from the Khazineh phase, and ledge-rim jars (Stronach 1961:pl. LIV:1–3), both assemblages contain large open bowls with scallops painted on the interior, at the rim (Hole, Flannery, and Neely 1969:fig. 60a–g; Stronach 1961:pl. LI:9). Imports from Deh Luran have also appeared in central Mesopotamian sites. Sherds tentatively identified as Mehmeh Red-on-Red Ware were found in small quantities at Ras al^{c}Amiya (Hole, Flannery, and Neely 1969:159; Stronach 1961:107, 121–22, pls. XLVI:8, LI:7; Porada et al., this vol., chap. 5), and a spouted holemouth jar of Mehmeh Red-on-Red Ware was found at Choga Mami in a "Late Ubaid" well (Oates 1969:128, 139). Bent clay nails, common in Mehmeh deposits (Hole, Flannery, and Neely 1969:210, fig. 91a, table 42), are considered diagnostic of Ubaid 3 (e.g., Stronach 1961:107; Oates 1969:139; Safar, Mustafa, and Lloyd 1981:fig. 72; Tobler 1950:169, pl. LXXXIII:f–g). Although the excavators of Tepe Sabz stress ties with plateau settlements such as Sialk III, Hissar IA, and Giyan, based on the occurrence of animal and human motifs (Hole, Flannery, and Neely 1969:362), such motifs occur over a long time span in Khuzistan.

J. *The Bayat phase* is documented at Tepe Sabz and Farukhabad, with the Farukhabad material slightly later (Hole, Flannery, and Neely 1969:61–64, figs. 18–19; Wright 1981:58–59). The Bayat assemblage is very similar to Jaffarabad 3m–n, Jowi 10–5/4, Bendebal 26–13 and Chogha Mish Middle Susiana 3, and is equivalent to Le Breton's Susiana c (Dollfus 1983:166, tables 41–42; Wright 1981:59). Thin-walled bell-shaped bowls from the Bayat phase are paralleled in Eridu IX–VIII (Hole, Flannery, and Neely 1969:fig. 62e, k, m; Safar, Mustafa, and Lloyd 1981:fig. 84:6, 7, 10; H. Wright, pers. comm. 1986). There are also numerous parallels between early Bayat and Gawra XVIII–XVII (Hole, Flannery, and Neely 1969:figs. 58f–g, q, 61k–l, 62e; Tobler 1950: pls. LXXII:a–c, CXXII:104, CXX:88, CXXI:95, LXXIV:b1–2; see also Wright 1981:68–69). Thus Bayat, like the preceding Mehmeh phase, is related to Ubaid 3 settlements in Mesopotamia (see also Dollfus 1983:166; Wright 1981:68–69).

K. *The Farukh phase* is defined at Farukhabad by Excavation A:layers 31–23 and Excavation B:layers 47–37 (Wright 1981:12–22, figs. 4–9). Surface remains indicate that at this time the major center in Deh Luran was at Musiyan (Wright 1981:66). According to Dollfus, the only excavated assemblage in Susiana comparable stylistically with Farukh comes from Bendebal levels 12–11 and Qabr Sheykheyn 3–2, or Susiana d (Dollfus 1983:166–67, tables 41–42; Wright 1981:59). Individual pottery types, however, have a longer time span, with conical goblets occurring at Bendebal as early as level 21 (Dollfus 1983:figs. 58:5, 66:1, 83:2), and design parallels with the Farukh phase occurring from Bendebal 16 on (compare Wright 1981:fig. 24a with Dollfus 1983:fig. 77:8–9; Wright 1981:fig. 17b with Dollfus 1983:fig. 83:8). Two sherds of impressed pottery classified as Khazineh Red Ware were found in the earliest Farukh level (Wright 1981:fig. 10d–e). They appear to be examples of Dalma Impressed Ware, contemporary with Ubaid 3 or perhaps early 4 (E. Henrickson 1983:196, fig. 50; see "Mahidasht" and "Godin").

The excavator divides this phase into Early, Middle and Late subphases, based on changes in the frequencies of ceramic attributes (Wright 1981:57–58, tables 8–10). Although the sample is small, these subphases do have chronological significance in relating the Deh Luran and Southwestern Zagros sequences (q.v.).

L. *The Post-Farukh phase* is represented by surface remains that fall into two groups: (1) Tepe Musiyan and one or two other sites that produced Black-on-Buff Ware apparently related to Susa A ceramics in Susiana; and (2) Sargarab and Chakali with unpainted pottery closely related to sites in the highlands (Wright 1981:70, fig. 33). Sargarab and Chakali are both located on the piedmont slopes at the foot of the mountains, near a pass leading to high pastures in the Kabir Kuh.

The predominant ceramic type within the Sargarab "assemblage" is Sargarab Ware, which differs from Susiana wares in the use of a mixture of grass and crushed calcareous rock as temper, as well as in vessel forms and decoration (Wright et al. 1975:135–36, figs. 7–8). Also found at Sargarab were a basin of the type found in Terminal Susa A and very early Uruk levels at sites in Susiana (Wright et al. 1975:fig. 9f; unpublished data from KS-34 and Susa Acropole III, H. Wright, pers. comm. 1986) and four ledge-rim jars with a fine sand temper that have been tentatively identified as Uruk Ware and dated to Early Uruk (Wright et al. 1975:136–37).

Wright states that "almost every feature" of the Sargarab pottery is paralleled in ceramic industries in central Luristan, at sites such as Kunji Cave, Baba Jan, Godin and in the Hulailan Middle Chalcolithic (Wright et al. 1975:133; Wright 1978:233). There seems to be little question that the technology of Sargarab Ware is indigenous to sites in the highlands. Vessel forms and decoration indicate that Kunji, Baba Jan V, Godin VII–VI/V, and unexcavated sites in Luristan form a ceramic group that can be differentiated from Sargarab, but that a range of stylistic attributes are also shared. These include (1) bowl and jar forms (compare Wright et al. 1975:figs. 6c–e, 8b–c; Goff 1971:fig. 7:14–15; Young and Levine 1974:fig. 13:6; Wright et al. 1975:figs. 6n, 7f–g; Goff 1971:figs. 6:28, 30, 7:10–12; Mortensen 1976:figs. 8, 9d, f; Wright et al. 1975:134, figs. 6j, m, 7d; Goff 1971:figs. 5:12–13, 20–21, 26, 6:15, 17, 7:2–6, 19; Mortensen 1976:fig. 7a; Young 1969:figs. 6:8, 9:5, 16, 24; Wright et al. 1975:fig. 8h–j; Goff 1971:fig. 5:22, 25; Mortensen 1974b:fig. 38g–h; Young 1969:figs. 7:16, 24, 9:7) and (2) the use of appliquéd strips bearing round or oval impressions (Wright et al. 1975:figs. 7e, h, j, 8a; Goff 1971:figs. 5:40$_1$, 6:25–27, 7:9, 17–18, 21–22; Mortensen 1976:figs. 6h, 8f; Young and Levine 1974:fig. 13:14). Some of these forms also occur at sites much farther to the north in the Zagros, around Bukan (Swiny 1975:fig. 1:3, 11–12, 14, and survey collections in the University Museum). Red-slipped vessels with black-painted bands from Sargarab (Wright et al. 1975:fig. 8e, h) have been identified with the distinctive Black-on-Plum Ware found at Susa A and sites in the Zagros by E. Henrickson (1985b:table 5; see "Susiana" and "Central Western Iran"); however both Dollfus and Wright state that the Sargarab vessels are unlike Susa A Black-on-Plum in form, design, and surface finish (pers. comm. 1985, 1986).

Wright interprets the data from Sargarab and Chakali as possible evidence for settlement on the Deh Luran Plain by groups moving down from the highlands, perhaps transhumants (Wright et al. 1975:137, 140; Wright 1981:70). The ceramic evidence supports this hypothesis, but the chronological placement of these settlements remains problematic. Wright assigns the Sargarab material to a separate cultural phase and places it within the "Terminal Ubaid period." Also placed within this chronological unit is the "Terminal Susa A phase" in Susiana (Wright 1981:167–69; Wright et al. 1975; Wright and Johnson 1975).

Given the similarity of the Sargarab assemblage to Early Uruk pottery at Farukhabad (compare Wright et al. 1975:figs. 7–8; Wright 1981:figs. 41, 43a) and the occurrence of Uruk Ware at Sargarab itself (Wright et al. 1975:137, fig. 8k), it is unclear whether Sargarab and Chakali represent an occupation of the plain during a hiatus at Farukhabad or whether these sites are in fact contemporary with the Early Uruk at Farukhabad. The predominance of Sargarab Ware in the Early Uruk deposits at Farukhabad and its subsequent decline in popularity (Wright 1981:table 36) could be used to support either position. If we assume that the frequency of all artifact classes in an ongoing sequence takes the form of a battleship curve, then Sargarab should be earlier than the Early Uruk levels at Farukhabad, representing a phase before Uruk wares gained popularity. However, if Sargarab represents a small number of highland groups with a distinct ceramic technology moving down onto the plain, then the relative frequencies of Sargarab and Uruk wares at Farukhabad may document exchange, with the "new" or exotic ware gradually disappearing as the immigrants adopted new styles and technologies from their neighbors.

Both a rectangular stamp seal with dogs and caprids paralleled in Gawra XI (Tobler 1950:pl. CLXIX:158) and the ceramic comparisons with other regions favor a date for the Sargarab assemblage within the Uruk period. The only well-dated pottery comparable to Sargarab comes from Godin VII to VI/V, contemporary with Early to Late Uruk (see "Mahidasht" and "Godin"). Pending the complete analysis and publication of Seh Gabi and Godin and the excavation of a Sargarab assemblage, we can place Sargarab after the Farukh/Late Ubaid occupation of Deh Luran, but cannot determine whether it is contemporary with Susa A, Early Uruk, or perhaps both. We urge in any case that the term *Terminal Ubaid* as applied to Sargarab be discontinued. Sargarab is not only non-Ubaid in technology and style, but is closely linked with Uruk, with diagnostic Uruk elements of form occurring in Sargarab Ware at Farukhabad (Wright 1981:165–72, tables 38–41, fig. 44).

M. *The Uruk phase* has been documented at Farukhabad where it follows a stratigraphic hiatus (Wright 1981:167). It has been divided into three phases by the excavator.

1. *Early Uruk* occurs only in Excavation B and consists of two strata, layers 36 and 35, excavated over an area that never exceeded ca. 25 m^2 (Wright 1981:73–74, table 2, figs. 8, 36a). The pottery consists of chaff- and grit-tempered Sargarab Ware, with the addition of some characteristic sand-tempered Uruk wares and a special chaff-tempered form—the beveled-rim bowl (Wright 1981:168–69). Reasonable comparisons of the Uruk forms can be made with Warka-Eanna XIII or XII and Susa Acropole I:23 or 22 (Wright 1981:169). Links between the Sargarab vessels and highland sites (Wright 1981:91) have been discussed above.

2. *Middle Uruk* material comes from Excavation A:layers 22–21 and Excavation B:34–32 (Wright 1981:table 2). Definition of the Middle Uruk is based on an increasing frequency of standard Uruk forms, especially beveled-rim bowls, and the appearance of new elements including crosshatched incised bands on jar shoulders, small conical spouts, conical cups, and low expanded band rim jars (Wright 1981:169, tables 35–41, figs. 45a, 48a–c, e–h, j, 50e, i–j, 51a, c–e, 52i, l, 55a, 56o, 57a–b, e–f, i–k; see also fig. 40). Although the Middle Uruk at Farukhabad has many local features, it can be compared to Middle Uruk levels in the Innana sounding at Nippur, and correlated "by interpolation" with Warka-Eanna XI–VII and Susa Acropole I:21–20 (Wright 1981:172; pers. comm. 1986).

3. In *Late Uruk* there is a further expansion of the settlement at Farukhabad, with excavated material from all three major soundings: Excavation A:layers 20–18, Excavation B:31–28, and Excavation C:33–32). The initial occurrence of polychrome painting is in this phase (Wright 1981:111, fig. 58a, g–i). The Farukhabad Late Uruk "shares many features" with Warka-Eanna VII–IV and Susa Acropole I:19–17, including twisted handles, grooved and oblique shoulder decorations, bottles, and droop spouts (Wright 1981:172; see "Susa Area").

N. *The Jemdet Nasr phase* at Farukhabad has been redefined following the Tübingen Conference as those levels called "Early Jemdet Nasr" in the site report: Excavation A:17–13, B:27–24, and C:31–27 (Wright, pers. comm.). The pottery is "in many respects, a simplified version of the Late Uruk assemblage" (Wright 1981:172). Again, the distinctive local character of the plain wares within this assemblage makes it difficult to establish correlations with other regions (Wright 1981:173–74). The dating of this phase within the Jemdet Nasr period is, therefore, based on comparisons of the polychrome vessels (H. Wright, pers. comm. 1986).

O. *The Early Dynastic phase* is known from Farukhabad and has been subdivided into two chronological units. Early Dynastic I includes what was called "Late Jemdet Nasr" in the site report, Excavation A:12–6, B:23–21, and C:26–24 (Wright, pers. comm.; Dittmann 1986(b)). Early Dynastic II–III is defined by material from Excavation A:5–1, Excavation B:20–19, and Excavation C:23–9 (Wright 1981:table 2, figs. 34–35; pers. comm.). A Late Polychrome style with complex designs composed of fine parallel oblique lines and crosshatching appears in Farukhabad EDII–III (Wright 1981:173, figs. 58a, c, 59e, l, 61c, e, i–k). Similar vessels are found in the Hamrin, the Diyala, and at cemetery sites in the Pusht-i Kuh (Carter 1987).

P. *The Elamite phase* pottery sample is small but useful because of its geographical position between the better-known sites in Mesopotamia and Susa (Carter 1981:200–209). The early Elamite ceramics from Excavation B:18–15 date to the Shimashki period (ca. 2100–1900 B.C.), and may be compared to Susa Ville Royale BVI and levels 3–4 in Carter's Ville Royale 1 sounding. In Mesopotamia these forms have a range from Akkadian to Isin-Larsa but are concentrated in the late Ur III and early Larsa levels at Nippur (Carter 1981:202).

Susiana

From Deh Luran, a route leads along the foothills to the southeast. The earliest farmers in Susiana seem to have settled within this zone, moving east of the River Dez before colonizing the rolling gravel plains to the south. In relating the regional sequences within Khuzistan, it is convenient to move from Deh Luran to eastern Susiana where there is a long history of settlement prior to that in western Susiana. This violation of our west-to-east rule is also advantageous in that it allows an immediate comparison between the better-published sites in western Susiana and Fars.

The Eastern Susiana Sequence

The major excavated site east of the River Dez is Chogha Mish, located on the edge of the Susiana Plain only a few miles from the Zagros foothills. Excavations were carried out from 1967 to 1978 under the direction of P. Delougaz and H. Kantor (Delougaz 1967, 1976; Delougaz and Kantor 1971, 1972a, 1972b, 1975a, 1975b; Kantor 1974, 1976a, 1976b, 1976c, 1978, 1979). Additional soundings by the Chogha Mish team, aimed at the recovery of early material, were made at Chogha Bonut-i Moezi (Kantor 1978) and Boneh Fazili (Delougaz and Kantor 1972b). Later prehistoric and protohistoric material was recovered through area excavations conducted by H. Weiss at Qabr Sheykheyn (Weiss 1972, 1976) and stratigraphic soundings by D. McCown and J. Caldwell at Tal-i Ghazir (Caldwell 1968; Whitcomb 1971). Surface surveys in western Susiana for the period before 2000 B.C. were conducted by R. McC. Adams (1962), F. Hole (1969, 1987a:figs. 9–10), G. Johnson, and H. Wright (Johnson 1973, 1976, 1987; Wright and Johnson 1975; Wright 1987; see also Weiss 1976, 1978).

A. *The Aceramic Susiana period* has been documented only in a 2 m deposit of ashy trash and earth floors at the bottom of a "small stratigraphic trench" at Choga Bonut (Kantor 1978:191). The presence of stone vessel fragments in this small sample suggests that Aceramic Susiana is contemporary with the Ali Kosh phase in Deh Luran, rather than with the earlier Bus Mordeh phase in which stone vessels were rare (see Hole, Flannery, and Neely 1969:table 10).

B. *The Formative Susiana period* is defined by 1.5 m of deposit stratified above the Aceramic at Chogha Bonut, and by deposits stratified below the Archaic at Boneh Fazili (Delougaz and Kantor 1972b:96; Kantor 1978:191). It is characterized by a chaff-tempered pottery with a bright red-to-plum wash or filmy paint. A group of sherds with simple geometric designs "can be considered ancestral to Painted Burnished Ware of Archaic [Susiana] 1" (Kantor 1978:191, fig. 2). Stacked triangles and wide plain bands at the rim provide a tentative link between the Formative Susiana pottery and the Sefid phase in Deh Luran (compare Kantor 1978:fig. 2 with Hole 1977:figs. 43r, v, w, 44z–aa).

C. *The Archaic Susiana period* occurs at Chogha Bonut (Kantor 1978) and Boneh Fazili (Delougaz and Kantor 1972b) as well as at Chogha Mish (Delougaz and Kantor 1972a:16). Buildings constructed of long, finger-impressed bricks were found at Chogha Mish and Boneh Fazili (Delougaz 1976:35–38, figs. 9, 13–20). Three ceramic phases were defined based on painted wares from the Gulley Cut at Chogha Mish (Delougaz and Kantor 1972b; Kantor 1976b:25–27).

1. *The Archaic Susiana 1 phase* is characterized by Painted Burnished Ware (Kantor 1974:fig. 5, 1976c:184, figs. 28–30), which indicates strong ties with sites to the west and north. Pottery from Tepe Tulaᶜi near Jaffarabad that can be identified as Archaic 1 Painted Burnished Ware is also said to be "nearly indistinguishable" in attributes of fabric and shape from Deh Luran types dating to the Mohammad Jaffar through Surkh phases (Hole 1974:228, figs. 11–14; see also Hole 1977:table 8). T-shaped figurines, common in the later part of the deposit at Tulaᶜi and also present at Chogha Mish (H. Kantor, pers. comm. 1985), provide a second link to the Sefid and Surkh phases (Hole 1974:fig. 15f–g, i–k; see also Hole 1977:table 72, 1978:table 4; Dollfus 1983:table 42). A more specific link between Archaic 1 and Deh Luran is a single unusual vessel from a Surkh context at Chagha Sefid which is closely comparable in style as well as technology to a large group of sherds from Archaic 1 (compare Kantor 1976c:fig. 28 lower right, fig. 30, with Hole 1977:fig. 44bb). Taking the evidence as a whole, we suggest that Archaic 1 is contemporary with late(?) Sefid and Surkh in Deh Luran.

Chogha Mish Archaic 1 sherds in the collection of the Oriental Institute are virtually identical to Late Sarab wares, including Sarab Linear Painted and Sarab Black-Slipped (L. Levine and E. Henrickson, pers. comm. 1985; see also McDonald 1979:fig 14y). Ties between Archaic 1 and the plateau are more tenuous. The fabric of some Archaic 1 sherds is reminiscent of Mushki pottery from Fars recovered by the Sumner survey (M. Voigt observation), and a similarity between Archaic 1 designs and Jari lattice and meander patterns has also been suggested (Delougaz and Kantor 1972a:23).

2. *The Archaic Susiana 2 phase* is characterized by Red-line Ware (Kantor 1974:fig. 4, 1976c:fig. 27), originally called "Chevron Ware." The painted ceramics of Archaic 2 are closely related to Archaic 3, and represent a break from Archaic 1 in temper, surface finish, and painted design. There are no good parallels for this phase

within the Deh Luran sequence, but given the relationships between Archaic 1 and 3 and Deh Luran (q.v.), Chogha Mish Archaic 2 should be contemporary with the Surkh phase, and probably only the latest part of Surkh. There is some stylistic similarity between this phase and ceramic industries in the central Zagros, consisting of hourglass motifs and nested zigzags or chevrons, present on Zagheh Archaic and Sarab Linear Wares as well as in Archaic 2 (Kantor 1976c:fig. 27; Levine and McDonald 1977:pl. Ia; Malek Shahmirzadi 1977b:pls. IX:20–33, XIII:Z40246).

3. *The Archaic Susiana 3 phase* is characterized by Close-line Ware, formerly "X Ware," and Mat-painted Ware (Delougaz and Kantor 1972a:pl. VIa; Kantor 1974:fig. 4, 1976c:183–84, fig. 25). Mat-painted Ware has no good parallels. Close-line Ware, however, is very similar to the Chogha Mami Transitional pottery of Chagha Sefid and Choga Mami itself (see "Deh Luran") and provides a good relative date. Kantor considers Chogha Mish Archaic 3 to be significantly earlier than its Mesopotamian analogues (1976c:184), but others working with related assemblages disagree (Dollfus 1983:table 42; Hole 1978:table 4).

D. *The Early Susiana period* has been found at Chogha Mish and Boneh Fazili (Delougaz and Kantor 1972b:96). Close and identical parallels for Early Susiana painted pottery lie in Eridu levels XVIII–XV, or the Late Eridu and Hajji Mohammad periods (compare Kantor 1976c:fig. 19 with Safar, Mustafa, and Lloyd 1981:figs. 92:18–19, 99:15; Kantor 1976c:fig. 20 with Safar, Mustafa, and Lloyd 1981:figs. 90:5, 92:2, 4–5, 7–8, 94:6, 8–9, 12, 14, 96:4, 1; Kantor 1976c:fig. 17 with Safar, Mustafa, and Lloyd 1981:figs. 91:14, 97:6). Vessel forms and some designs characteristic of the Chogha Mish Early Susiana period are found in the Sabz phase in Deh Luran (compare Kantor 1980:18 with Hole, Flannery, and Neely 1969:fig. 50). Within the Susiana Plain, Chogha Mish Early Susiana is contemporary with Jaffarabad level 5, formerly Susiana a (Dollfus 1983:165, table 41). Parallels include figurines as well as ceramics (Kantor 1979:38; Dollfus 1975a:fig. 32:1, pl. XVIII:1). Nearly identical figurines are found in Eridu level XVI (Safar, Mustafa, and Lloyd 1981:fig. 116:8).

E. *The Middle Susiana period* has been recovered at Chogha Mish, Chogha Bonut, Boneh Fazili, and Qabr Sheykheyn. Pottery form and design have been used to define a break between the Early and Middle Susiana periods, as well as to divide the Middle Susiana period into three phases (Kantor 1976c:179–81).

1. *The Middle Susiana 1 phase* has many similarities to Early Susiana and seems to be a "true intermediate phase" (Kantor 1976c:181). The pottery is part of a horizon usually referred to as "Hajji Mohammad," which extends throughout southern Mesopotamia and along the shores of the Persian/Arabian Gulf (Kantor 1976c:180–81, figs. 10, 12–14). Within Khuzistan, the distinctive bowls of this style/phase illustrated from Middle Susiana 1 are also found in the Khazineh phase of Deh Luran and in Jowi level 15 (compare Kantor 1976c:fig. 10 with Hole, Flannery, and Neely 1969:fig. 56a; Dollfus 1983:fig. 13:8; for additional parallels between Jowi 17–13 and unpublished Middle Susiana 1 material see Dollfus 1983:figs. 11–23).

2. *The Middle Susiana 2 phase* pottery shows a great range of vessel shapes and motifs. Painted designs are "bold" and "provide some striking antecedents for characteristic Late Susiana features" (Kantor 1976c:178, figs. 1–9, 11). Within Khuzistan, one bowl type characteristic of this phase is paralleled in the Khazineh phase in Deh Luran (Kantor 1976c:fig. 11; Hole, Flannery, and Neely 1969:fig. 56g), but representational motifs are shared with the succeeding Mehmeh phase (Kantor 1976c:figs. 1, 7–8; Hole, Flannery, and Neely 1969:figs. 59d, 62c, 63l–m). Dollfus compares Middle Susiana 2 with Jowi 11–12, contexts that also produced sherds of Mehmeh Red-on-Red (1983:166, table 41; pers. comm. 1985).

3. *The Middle Susiana 3 phase* is defined by a large ceramic sample from the Burned Building in the East Area of Chogha Mish (Kantor 1976b:27–28). Also dating to this phase is the lowest part of the deposit at Qabr Sheykheyn (5 and below; Dollfus 1983:166, fig. 41). Good ceramic parallels link Middle Susiana 3 with the Mehmeh phase in Deh Luran with its distinctive goat bowls (compare Kantor 1976b:fig. 14 with Hole, Flannery, and Neely 1969:fig. 58e–f; Kantor 1976b:fig. 13 top with Hole, Flannery, and Neely 1969:fig. 60a, g). According to Dollfus, some of the Middle Susiana 3 material is also contemporary with the Bayat phase (1983:table 42). Within Susiana, Chogha Mish Middle Susiana 3 is equivalent to Jaffarabad 3m–n, Jowi 10–4, and Bendebal 27–17 (Dollfus 1983:table 41).

F. *The Late Susiana period* has been excavated at Chogha Mish (Delougaz and Kantor 1972a:21–22; Kantor 1976a:28). Based on ceramic parallels, Chogha Mish Late Susiana is considered contemporary with Susa A settlements such as Jaffarabad 3–1, Bendebal 10, and Susa Acropole I:27–25 (Delougaz and Kantor 1972a:16, pl. IVa–c; Dollfus 1983:table 41; Hole 1978:table 4). The correlation of Middle Susiana 3 and the Mehmeh phase in Deh Luran (q.v.) indicates that at Chogha Mish there must be a gap between Middle Susiana 3 and Late Susiana. Dollfus places Qabr Shekheyn 4–1 within this gap (1983:166–67, table 41; see also Weiss 1972, 1976).

G. *The Protoliterate (Uruk) period* has been documented at Chogha Mish, in a carefully excavated pit at Sharafabad (Wright, Miller, and Redding 1980), and in the "Early Proto-Elamite"/Uruk deposits within the Step trench at Tal-i Ghazir (levels 11–38; Caldwell 1968:350–

51, figs. 11–38; Carter 1984:115, 121–22, figs. 7, 15; Whitcomb 1971:13–14, fig. 4; Wright 1978:table 5). At this time Chogha Mish was a major settlement with a city wall and imposing buildings as well as houses (Delougaz 1967:148, 1976:32; Johnson 1973:71–73; Delougaz and Kantor 1973:189). Pottery forms included hundreds of types, "many of them new" (Delougaz and Kantor 1972a:26). The most important were beveled-rim bowls, squat jars with four lugs, and a great variety of spouted bottles (Delougaz and Kantor 1972a:pls. VIIb, d, f, VIII). Based on the published seals (Delougaz and Kantor 1972a:30–31, pl. X; Kantor 1979:34) and the presence of numerical tablets (Kantor 1976b:24–25, figs. 5–6), the Chogha Mish Protoliterate period should be contemporary with Susa II, or Acropole I:18–17 (Le Brun 1978a; Le Brun and Vallat 1978; Wright 1978:table 5).

H. *The Proto-Elamite period.* After the Protoliterate occupation Chogha Mish was abandoned until the second millennium, but the Tal-i Ghazir "Stake [Trench] 10 rooms" apparently fall within this time range (Caldwell 1968:355, fig. 39; Whitcomb 1971:16–17, fig. 5). The Stake 10 rooms are probably contemporary with Proto-Elamite settlements such as Susa III, Malyan Middle Banesh, and Yahya IVC (Carter 1984:122, fig. 15; Wright 1978:table 5).

Western Susiana: The Susa Area Sequence

The modern stratigraphic sequence in the Susa area has been established primarily through recent excavations by the French Archaeological Mission at Jaffarabad (Dollfus 1971, 1973, 1975a, 1975b, 1978b), Jowi (Dollfus 1977, 1978b, 1983), Bendebal (Dollfus 1978a, 1978b, 1983), and Susa. At Susa, the key areas are Acropole I levels 27–13 (Le Brun 1971, 1978b, 1978c) and Ville Royale I levels 18–3 (Carter 1976, 1978, 1980). The Acropole I sounding is augmented by work on the High Terrace by Perrot and Canal (Canal 1978a, 1978b); a sounding on the east side of Morgan's Grande Tranchée (Dyson 1966); Wright's Acropole III sounding at the north end of the mound, on the western edge of the Sondage Nord of Mecquenem (Wright 1985); and by general excavations on the Acropole by Stève and Gasche (their 1965 Sondage, loci 374, 376; Chantier Ouest 1966 and 1968, loci 101, 102; Chantier de la Terrasse 1968, loci 266, 267, 282, 332, 334; see Alden 1982b:table 1; Stève and Gasche 1971). Additional information for the earliest part of the sequence was obtained through salvage excavations conducted by Frank Hole at Tepe Tula'i (Hole 1974, 1975). Surface surveys aimed at the recovery of sites that existed before 2000 B.C. were conducted by R. McC. Adams (1962), J. Alden (1987), F. Hole (1969, 1987a), G. Johnson (1973, 1976, 1987), and H. Wright (unpublished; see Hole 1987a:39).

A. *The Archaic period* is defined by excavations at Tepe Tula'i (Hole 1974, 1975). The ceramics were so similar in technological attributes to pottery from Deh Luran that they were sorted using the following Deh Luran types: Jaffar Painted and Plain, Khazineh Red, and three varieties of Sefid Painted Ware (Hole 1974:235–36). Based on a comparison of type frequencies Hole (1974:235) has suggested that Tula'i is contemporary with late Mohammad Jaffar and early Sefid. Stylistic attributes, however, indicate that Tula'i is more closely linked to Chogha Mish than to Deh Luran, specifically to Chogha Mish Archaic 1 Archaic Burnished Ware (Hole 1974:235, figs. 11–14; Delougaz and Kantor 1972a:pl. VIb–i; Kantor 1974:fig. 5).

B. *The Jaffarabad period* was defined by large-area clearances in levels 6–4 at Jaffarabad and includes related material from smaller excavations at Jowi levels 17–13 and Bendebal levels 28 and below (Dollfus 1975a:16–22; figs. 6–8; 1978b:158, fig. 13; 1983:20–21, 137, fig. 5–7; pers. comm. 1983). Chaff-tempered Plain Buff Ware makes up 62 percent of the sample at Jaffarabad (Dollfus 1975a:23–24, figs. 10–15; 1978b:fig. 12; 1983:24–25,figs. 11:15–16, 12:3–4, 13:1–2, 8–10). It is, however, at this time that grit-tempered ceramics appear in Susiana (Dollfus 1975a:23–25). Painted Buff Ware vessels are often so heavily painted that designs appear in reserve (Dollfus 1975a:25–30, figs. 16–30; 1978b:figs. 13–14; 1983:26–28, figs. 12–18, 21–23).

Based on firsthand knowledge of the material, Dollfus places the earliest part of the Jaffarabad period (Jaffarabad 6) contemporary with the latest part of Chogha Mish Archaic 3, and the rest of the period parallel to the Chogha Mish Early Susiana and Middle Susiana 1 periods (Dollfus 1983:tables 41–42, figs. 17–30 with refs.). Within the Deh Luran sequence, parallels for most of the Jaffarabad period are with the Sabz and Khazineh phases (Dollfus 1983:tables 41–42). In the Mesopotamian sequence, this period corresponds to the Eridu and Hajji Mohammad periods (Dollfus 1983:table 42; see also "Deh Luran"; and Porada, Hansen, Dunham, and Babcock, this vol., chap. 5). A striking nonceramic parallel linking Jaffarabad with Eridu XVI occurs in the form of columnar human figurines that have been incised to indicate legs and pubic triangle, and painted to indicate clothing (Dollfus 1975a:fig. 32:1, pl. XVIII:1; Kantor 1979:38; Safar, Mustafa, and Lloyd 1981, fig. 116:8).

C. A short *Transitional phase* represented by Jowi levels 12–11 and Bendebal 28 is approximately equivalent to Chogha Mish Middle Susiana 2 (Dollfus 1983:table 41).

D. *The Chogha Mish period* was originally defined as levels 3 m–n at Jaffarabad (200 m² cleared), and later extended to include Jowi 10–4 and Bendebal 27–11 (Dollfus 1975a, 1978b, 1983:table 41, pers. comm. 1983).

The duration of this period has been estimated at up to 750 years based on the depth of deposit at Bendebal (Dollfus 1983:table 41). The ceramic industry (Dollfus 1975a:figs. 47–53; 1978b:16, figs. 15–17; 1983:figs. 32–38, 54–87) is virtually identical to that from Chogha Mish Middle Susiana 3. It is also related to Qabr Sheykheyn 4–2 and to the Mehmeh, Bayat, and Farukh periods in Deh Luran (Dollfus 1983:166, figs. 33–38, 56–87 with refs.). Within the Mesopotamian sequence it is therefore contemporary with both Ubaid 3 and 4 (see Parada et al., this vol., chap. 5). Ties to ceramic industries in Fars are also present (see "Southwestern Zagros"). A button seal with an incised quadrat design from Bendebal 15 is paralleled on a hemispherical seal with a tang from Sialk III, and on a hemispherical seal from Gawra described as coming from "below XII" (Dollfus 1983:fig. 95:5; Ghirshman 1938:pl. LXXXVI:S117; Tobler 1950:pl. CLIX:26).

E. *The Susa A/Susa I period* is defined by Jaffarabad levels 3d–1, Bendebal level 10, and Susa Acropole Sounding I, levels 27–24 (Dollfus 1971, 1978b, 1983:table 41, pers. comm. 1983; Le Brun 1978c:190). The large and well-controlled ceramic sample from Jaffarabad includes Plain Buff Ware, Painted Buff Ware, and Red Burnished Ware; Burnished Gray Ware and Black-on-Plum Ware are rare (Dollfus 1971:30–51, figs. 9–20; 1978b:165, figs. 18–19). At Susa, Plain Buff, Painted, and Red Wares have been recovered from a much smaller excavated area, ca. 100 m² (Le Brun 1971:206, figs. 31, 36–39; 1978c:fig. 30). The painted pottery of this period is elaborate, with representations of horned animals, dogs, birds, snakes, snails, and people in what appear to be "scenes" (Amiet 1966:figs. 11–16; Hole 1983b).

The ceramics from Jaffarabad levels 2–1, Bendebal 10, and Susa Acropole 27–25 correlate with those from Qabr Sheykheyn 1 and Chogha Mish Late Susiana (Dollfus 1983:167–68, table 41; pers. comm. 1983). The Black-on-Plum Ware found at Jaffarabad, which may be imported, provides a valuable synchronism with Zagros sites (Dollfus 1971:47–48, fig. 12:16–24; 1978b:fig. 19:17, 19–22). In the Mahidasht, it is found at Chogha Maran in Middle to Late Chalcolithic contexts; in the Hulailan Valley it occurs at Hakalan and Parchinah in Luristan (E. Henrickson 1983:491–92, 506, 509–10, 517, tables 69–70; see also "Western Luristan"). Wright (1978:233) states that the minority red wares of Susa 25–24 "duplicate in form and fabric the ceramics of the Lapui period of the Marv Dasht" (see "Southwestern Zagros").

The chronological relationship of Susa A/Susa I to sites in Mesopotamia rests primarily on glyptic evidence. A stamp seal impression showing an ibex-headed man holding two snakes (Amiet 1971:218–19, fig. 35:1–3; Dollfus 1971:fig. 23: 3–5) found in Acropole I:25 has direct counterparts in Gawra XIII–XI (Tobler 1950:pls. CLXII:76–80, CLXIII:81, CLXIV:94–96, 100, 101). Ties with Luristan are so numerous that Amiet groups the Luristan and Susa A material as part of a single glyptic tradition (1972:5–32, 1979:196). The form of a hemispherical seal from Acropole I:23 is paralleled in Sialk III$_5$, (Amiet 1971:fig. 35:7; Ghirshman 1938:pl. LXXXVI:S172) and in the Uruk period at Telloh (Buchanan 1967:528, 533–34). The latter is significant in that it suggests that late Susa A may have been contemporary with the Early Uruk period in Mesopotamia (Amiet 1971:220). Deposits assigned to the "Terminal Susa A" phase, or the transition between Susa A and Uruk at Susa, produced sherds from basins with thumb-impressed strips that are paralleled in levels II–IV of the Hut Sounding at Eridu and at sites near Nippur assigned to Early Uruk (H. Wright, pers. comm. 1986; see also Stève 1968:131).

F. *The Susa II (Uruk) period* marks a cultural break, with the disappearance of the Susiana painted pottery tradition and the appearance of ceramics and other artifacts very similar to Uruk materials found in Deh Luran and Mesopotamia (Amiet 1979:196; Wright 1981:181–84). At Susa, this period is defined by Acropole I:levels 22–17 (Le Brun 1978b:58–71, pls. XI–XIII, figs. 14–18; 1978c:180–83, figs. 31, 33). Other recently excavated material dated to this period comes from Acropole II:levels 6–1, Acropole III:10–1, and Apadana Trench 1038 (Canal 1978a:173; Miroschedji 1976; Wright 1985; for a summary of Susa II–III material from earlier excavations see Dittmann 1986b).

Pottery consists of typical Uruk fabrics and vessel forms: chaff-tempered Coarse Ware storage jars and beveled-rim bowls; buff, grit-tempered Common and Fine Ware jars and bottles with drooping spouts, shouldered jars with four vertical nose lugs and incised designs on the shoulder, squat jars with handles, cylindrical jars and open bowls; and beginning in Acropole I:18, Red-Slipped Ware (Le Brun 1971:figs. 45–53; 1978b:73–82, figs. 19–33; 1978c:figs. 32, 34). Within Khuzistan, ceramic parallels for Susa Period II occur at Chogha Mish in the Protoliterate period (Le Brun 1978b), in the early Proto-Elamite levels at Tal-i Ghazir (Carter 1984:121–22, figs. 2, 15), and in the "Uruk pit" at Sharafabad (Wright, Miller, and Redding 1980). Based on Le Brun's plates illustrating typical vessel types, Acropole I:18 pottery is comparable to Nippur Inanna XX–XVII or the Middle Uruk period in Mesopotamia (compare Le Brun 1978c:fig. 32:1, 2, 10, 11, 15 with Hansen 1965:203–4, figs. 10, 16, 12, 11a, 17, 18), and level 17 is related to Inanna XVII–XVI or Late Uruk (compare Le Brun 1978c:fig. 34:8, 11, 3, 2, 14 with Hansen 1965:204–6, figs. 17, 27, 34, 35, 21; see also Johnson 1973:tables 7, 11). The ceramic sample from Acropole I:22–19 is small and has not yet been described in detail, so whether the cultural correlation is between Susa II and Early to Late Uruk, or only Middle and Late Uruk, remains to be seen.

Glyptic evidence for the relationship between Susa II and Mesopotamia is difficult to interpret due to a dependence on style rather than on stratigraphic context and artifact association for the dating of seals from Mesopotamian sites. The earliest cylinder seal, decorated with two rows of fish, occurs in Acropole I:21 (Amiet 1971:221, fig. 43:10). It is a "well known Jemdet Nasr type" according to Amiet (1971:221); however, he points out that the motif occurs at Telloh in a context earlier than the Jemdet Nasr period. Glyptic materials from Acropole I:18–17B include geometric patterns, rows of animals, humans engaged in a variety of activities, and humans or animals associated with buildings (Le Brun 1978a; Le Brun and Vallat 1978:figs. 5–7; Vallat 1973:fig. 14; see also Dittmann 1986a). They are paralleled in Warka IV (Amiet 1971:222–23, 1979:199), dated to the Late Uruk period (Hansen 1965:204; Porada et al., this vol., chap. 5).

At a greater distance, there are strong ceramic parallels between Acropole I:17 and sites on the Euphrates such as Habuba Kabira and Kurban Hüyük VIII (Le Brun 1978b; Algaze 1986). Within Iran, ceramic links to the Zagros are found in Godin VI/V (Weiss and Young 1975; see also "Mahidasht" and "Godin") and in the Early Banesh period in the Marv Dasht (Alden 1979:60, fig. 12; see also "Southwestern Zagros"). Ceramic evidence for contact between Susa and settlements on the central plateau is found in Sialk IV_1 (Ghirshman 1938:pls. XXVI, LXXXVIII–XCV); see also Carter 1984:115, fig. 7; Dyson 1965:225). The Godin VI/V tablets are probably related to those from Susa II, and there are also parallels between the numerical tablets of I:17 and fragments from Sialk IV_1 (Stolper 1984:6; Vallat 1971:243; Weiss and Young 1975:11, figs. 4–5). At the end of the period, contacts between Susa and Godin VI/V cease, and Chogha Mish is abandoned (Amiet 1979:199).

G. *The Susa III period* is documented by Acropole I levels 16–14B and Ville Royale sounding I levels 18–13 (Le Brun 1978c:190; Carter 1978:table 1; Perrot 1978:fig. b; note that the Carter and Perrot charts just cited contain an error, reversing the position of Acropole I levels 14B and 14A as defined by Le Brun in 1971:fig. 32, 1978c:table I, fig. 29). Additional material from the Acropole was obtained in a 1965 Sondage and the 1968 Chantier de la Terrasse excavated by Stève and Gasche (1971:9–11, 25–41; see also Alden 1982b:table 1; Dittmann 1986b). Carter has divided the period into three phases, based on internal stratigraphy, ceramic typology, and external relationships (1978:198, 202, 211).

1. *The Susa IIIA phase* is defined as Acropole I:16–14B (Carter 1978:202; Le Brun 1971:189–202). It follows a short hiatus and marks the reoccupation of the Acropole by a group with close links to Fars (see Carter 1984:117 with refs.). There is a complete break in ceramic fabric and form between levels 17 and 16 (Le Brun 1978c:183, 190, 192). The chaff- and grit-tempered plain wares are joined in Acropole I:15 by Gray Ware with encrusted white decoration, Red-Slipped Ware, and black-and-red-painted Bichrome Ware (Le Brun 1971: 192–94, 199–201, fig. 64; 1978c:190, 192, fig. 36). Common shapes are footed goblets, jars with everted rims, trays and squat sinuous-sided bowls (Le Brun 1971:figs. 60–63, 1978c:fig. 36). Dittmann, in a paper given at the 1983 Tübingen Conference, discusses the difficulty of linking the ceramics of Susa IIIA to Deh Luran, much less to Mesopotamia. However, using a few well-dated types he compares I:16–14B with the Jemdet Nasr levels at Farukhabad, and with Nippur Inanna XIV–XI (1986b:table 2). On the plateau, Susa IIIA is comparable to the Middle and Late Banesh phases in the Kur River Basin (see "Southwestern Zagros"; Alden 1979:60, fig. 12; 1982b:fig. 2).

Glyptic evidence includes "glazed steatite"/chlorite cylinder seals and sealings with geometric patterns (also referred to as "schematic" seals by Amiet 1971:figs. 43:10, 44:20?, 59:3–4, 9, 17) and sealings on tablets in the distinctive Proto-Elamite style (Amiet 1971:225, figs. 59, 67:12; 1979:197). Amiet (1971:218, 227) says that this material corresponds to Le Breton's Cb–Cc and is "Jemdet Nasr" in style, with marked local originality (see also Amiet 1979:196–97).

2. *The Susa IIIB phase* is defined by the lowest levels (18–16) in the Ville Royale I sounding and Acropole I levels 14A–13 (Carter 1978:202, table 1). In Ville Royale I:18–17, over 220 m² has been cleared for this period (Carter 1978:197, figs. 38–39; 1980:13–15, figs. 2–3). Characteristic of the ceramic industry are plain grit-tempered Common Ware and Chaff-Tempered Ware (Carter 1978:202, fig. 41; 1980:16–17, 20, figs. 9–13). Decorative elements include plastic finger-impressed bands shaped to form triangles and semicircles, and incised decoration (Carter 1978:202, figs. 40–41; 1980:17).

Ceramic parallels may be drawn with the Early Dynastic I period in Mesopotamia, as at Nippur Inanna ED I and Sin Temple VI at Tell Asmar (Carter 1980:21). A Proto-Elamite tablet, sealings, and two frit cylinder seals were found; designs are limited to animals and linear patterns (Carter 1980:19, fig. 17). The designs on the frit cylinder seals are also related to those from Sin Temple VI or ED I (Carter 1980:19). A conical jar stopper from Ville Royale I:18 bears the impression of a seal with a row of horned goats and a pair of kneeling animals facing one another; similar impressions are dated by Amiet to ED II (Carter 1980:19, fig. 17:1).

Relationships with sites on the plateau form a consistent pattern. Carter considers the pottery to be contemporary with the latest Banesh at Malyan and with Yahya IVC–B (1980:20–21, 1984:fig. 8). The geometric style seals of Ville Royale I:18–17 compare with sealings from the Banesh period at Tepe Malyan, Yahya IVC, and Shahr-i Sokhta I (Carter 1980:19, fig. 17:3–5, 7 with refs.). Amiet considers the glyptic material from Susa IIIB to be contemporary with Sialk IV_2 (1979:195).

3. *The Susa IIIC phase* comprises Ville Royale I levels 15–13 (Carter 1978:table 1). The area cleared was less than 20 m² (Carter 1980:fig. 4), and the artifact sample was correspondingly small. In I:13, rare sherds of Monochrome Painted Ware with simple geometric designs, the Susa "second style," first occur (Carter 1980:20–21). Carter correlates the end of Susa III with the end of Early Dynastic II, since in Mesopotamia "wares of the second style date approximately to ED III" (1980:21; see also Dittmann 1986b). Amiet (1979:200) suggests that the end of this phase was due "not to an inner crisis, but rather to a defeat such as the one that the Sumerian King List ascribes to Mebaragesi from Kish."

H. *The Susa IV period* is defined by Ville Royale I levels 12–7 and also includes material excavated by Stève and Gasche on the Acropole (Carter 1978:table 1). Level 12 rests on an erosion surface which caps level 13, indicating some kind of local hiatus. The period has been subdivided by Carter.

1. *The Susa IVA phase* is equated with Ville Royale I:12–9, and with "Early Dynastic" couche 4 and "Proto-Imperial" couche 3 on the Acropole (Carter 1978:table 1; Stève and Gasche 1971). Plain buff Common Ware vessels decorated with incised wavy lines or finger-impressed appliqué (Carter 1978:fig. 43:3–8, 1980:figs. 25–27) and "significant numbers" of Monochrome Painted Ware sherds of the "Susa second style" now occur (Carter 1978:207–9, fig. 44; 1980:23, figs. 28, 29:1–10; see also Amiet 1966:figs. 108–9). Both the painted and plain wares of Susa IVA closely resemble pottery from Zagros sites (Carter 1980:25–26, figs. 25–29 with references; 1984:fig. 9); in fact the Monochrome Painted Ware can now be identified as imported Godin III:6 Painted Buff Ware (compare Carter 1978:fig. 44; 1980:23, figs. 25–29, 34–35 with R. Henrickson 1984a:figs. 51–52, 91). Direct ceramic parallels between Susa IVA and Mesopotamia are rare, but include conical cups, and conical bowls typical of ED III–Akkadian times (Carter 1980:24).

Not found in controlled contexts but assigned to Susa IVA because of their ED II–III date in Mesopotamia are an "Early Group" of steatite/chlorite vessels of intricate style and their bitumen copies (Carter 1980:31; Miroschedji 1973:9–25, figs. 4–5, pls. I–V; Amiet 1966:fig. 124, 1979:199, 200). The geographical distribution of such vessels demonstrates the existence of an important trade network linking Susa, the Persian Gulf, and southeastern Iran in this period (Amiet 1979:200; Carter 1984:134; Kohl 1975; Miroschedji 1973).

2. *The Susa IVB (Akkadian) phase* is documented by levels 8–7 of Ville Royale I as well as by levels on the Acropole (Carter 1978:table 1; Stève and Gashe 1971). As implied by the name, there is a shift back to Mesopotamian styles throughout the assemblage, presumably a result of the conquest of Elam by Sargon and his successors (Carter 1984:135; Stolper 1984:11–16). Within the ceramic industry Mesopotamian influence can be seen in a modeled "goddess handle" (Carter 1978:fig. 45:4; Delougaz 1952:pl. 87k–q) and the continuation of conical bowls (Carter 1980:24). During this phase, cuneiform script is adopted at Susa for the first time in the Treaty of Naram Sin (ca. 2291–2255 B.C.), but the Proto-Elamite script may also have continued in use (Vallat 1978:194).

I. *The Susa V (Shimashki) period* is defined by levels 6–3 in Ville Royale I, the contents of which closely correspond to Ghirshman's Ville Royale B:VI–VII (Carter 1978:211, 1984:146; Ghirshman 1970; see also Stève, Gasche, and de Meyer 1980). Because the Ville Royale I sample is very small, the division between period IV and V is arbitrary (Carter 1980:30). Based on minor ceramic changes, the period has been subdivided (Carter 1978:211).

1. *The Susa VA phase* is defined by Ville Royale I levels 6–5 (Carter 1978:table 1, 1980:26, fig. 37). Common Ware vessels are abundant, and Fine Ware largely replaces painted pottery (Carter 1978:fig. 46, 1980:figs. 38–39). Susa VA probably represents the brief period of Elamite independence between the Mesopotamian Akkadian (Susa IVB) and Ur III (Susa VB) ascendency. During this period Puzur/Kutik Inshushinak adopted linear script for the national Elamite language, replacing the older Proto-Elamite script (Vallat 1978:194). Examples of the linear script occur in the highlands on an unstratified silver vase said to come from Fars, and on a pottery vessel at Shahdad (Hinz 1969:11ff., 1971:21–24).

2. *The Susa VB phase* is defined by Ville Royale I:levels 4–3. Ceramic markers are "upright-indented-band-rim" bowls and ridged-shouldered jars (Carter 1978:211, 1980:figs. 41, 49–51). Inscribed material consisted of a cone of Puzur/Kutik Inshushinak redeposited[?] in level 4 along with a brick of Shu Shin of Ur III (Carter 1980:28; Vallat 1980). It is to this period that Miroschedji's "Late Group" of serpentine vessels with concentric circle decoration belongs (1973:26–42, figs. 7–12, pls. VI–VIII).

This period probably represents Susa after its annexation by the Ur III empire and the construction of the Ninhursag Temple on the Acropole (Amiet 1979:201). The dating of Susa VB contemporary with the Ur III period in Mesopotamia is secure, suggested by the inscriptional evidence, and confirmed by two cylinder seals and sealings that are well-known Mesopotamian types assigned to Ur III (Carter 1980:28–29, fig. 52). A serpentine vessel with concentric circles is dated by an inscription at Telloh to the reign of Amar Sin, King of Ur (Amiet 1979:202). These vessels as well as square-based cosmetic bottles decorated with concentric circles occur along the Persian/Arabian Gulf and across the Iranian plateau at Shahdad, Yahya IV, Hissar IIIC, and in Bactria at the end of the third millennium (Amiet 1979:202; see also "Shahdad"; and Potts, this vol., chap. 4).

Surveys in Adjacent River Valleys

Information on the relationship of Khuzistan to adjacent mountain zones comes from surface surveys, with limited tests carried out on the Izeh Plain (Wright 1979). On the Behbehan and Zureh Plains along the southeastern edge of Khuzistan, the survey was complemented by soundings made in Tepe Sohz and Do Tulune (Dittman 1984; Nissen 1976, 1973). These plains are important due to their geographic location, linking lowland Khuzistan and highland Fars (Dittmann 1984:64–71, tables 11–12; Dollfus 1983:table 42).

The Radiocarbon Evidence for the Southwestern Lowlands

Only two clusters of consistent dates have been obtained from sites in Khuzistan. These are for the Bayat period in Deh Luran, with a calibrated average date of 5080–4880 B.C. obtained from eight samples recovered from Tepe Sabz, and for the Susa A/Susa I period, with a calibrated range of 4115–3880 B.C. obtained from ten samples from Jaffarabad and Susa (table 1). Major inconsistencies in the radiocarbon record from other contexts (table 2) are probably due to the common use of bitumen by the early inhabitants and contamination of charcoal samples by this material. As a result, dates frequently are "too old" (see, for example, the dates from Qabr Sheykheyn, *RC* 19:204).

There is some reason to treat the Bayat dates with caution, since they necessitate a long span of time for the archaeological material that falls between the Bayat and Susa A analyzed samples, which is assigned to the Farukh period in Deh Luran and the latter portion of the Chogha Mish period in Susiana. On the other hand, if the Bayat samples came from contexts within the early part of the phase, and/or were obtained from long-lived samples, this span of seven hundred years or more is compatible with the estimates based on depth of deposit provided by Dollfus (1983:table 41).

The chronometric dates for the earlier part of the sequence have been established by using the synchronism between Tell es-Sawwan I and the Mohammad Jaffar period in Deh Luran. Although there are only two carbon samples for Sawwan I, a cluster of dates for Sawwan III with a calibrated average range of 6100–5570 B.C. (Oates 1983:271; Porada et al., this vol., chap. 5) suggests that Sawwan I and hence the Mohammad Jaffar period should fall in the second half of the seventh millennium.

Southwestern Zagros (Fars)

The Marv Dasht (Kur River Basin) Sequence

The areas within the Kur drainage investigated most intensively by archaeologists are the Baiza and Marv Dasht or Persepolis Plains. The prehistoric sequence relies heavily on test excavations carried out at a number of sites during the 1950s by Vanden Berghe (1952, 1954, 1959, 1968c; see also Sumner 1972a:294–96) and on surface surveys (Sumner 1972a, 1977a; see also Alden 1979; Gotch 1968, 1969; Jacobs 1980; Rosenberg 1980; Stein 1936; Vanden Berghe 1952, 1954). The key excavated sites are Tal-i Mushki (Fukai, Horiuchi, and Matsutani 1973; Sono 1967; Sumner 1977a:293–94, 1980); Tal-i Jari A and B (Egami 1967; Egami Masuda, and Gotoh 1977; Sumner 1977a, 1980); Tal-i Bakun A and B (Egami and Masuda 1962; Langsdorff and McCown 1942; Schmidt 1939a, 1939b; Sumner 1972a, 1980); Tal-i Gap (Egami and Sono 1962; Sono 1967); Tal-i Nokhodi (Goff 1963, 1964; Sumner 1977a); Tal-i Kureh (Alden 1977, 1979); and Tal-i Malyan (Sumner 1972b, 1974, 1976, 1980, 1985; Nicholas 1980; Nickerson 1977).

A. *The Mushki period* is defined at Tal-i Mushki. Initially tested by Vanden Berghe (1952:214), it was more extensively excavated by the Tokyo University Iraq-Iran Archaeological Expedition under Namio Egami (Fukai, Horiuchi, and Matsutani 1973:2). The placement of the Mushki assemblage at the beginning of the Marv Dasht sequence has been the subject of controversy. Characteristic of Tal-i Mushki is Red-Slipped (Mushki) Ware, usually decorated with dark-painted linear designs on a burnished, red-slipped surface. Less common Buff-Slipped Ware with painted designs on a mat or (rarely) burnished surface is related to Jari Ware (see below). Based on his excavations and ceramic parallels with other regions, Vanden Berghe concluded that the Mushki "culture"/ware *followed* the Jari "culture"/ware. The stratigraphic basis for this conclusion is not known, since none of Vanden Berghe's tests has been fully reported (1952, 1954; see also Fukai, Horiuchi, and Matsutani 1973:76–79 for translations). Subsequent excavations by the Japanese did not actually document the superposition of Jari over Mushki (Fukai, Horiuchi, and Matsutani 1973:4, 31–34, 76–79, pls. XLII, XLVI); they did provide stratigraphic information that leads Sumner to conclude that the evidence for the priority of Mushki is "unequivocal" (pers. comm. 1985).

Ceramic parallels with other regions are only suggestive. Sumner sees a "generalized resemblance" between Mushki and Archaic Wares at Chogha Mish in Khuzistan (1977a:299). There is some stylistic similarity between Mushki and Chogha Mish Archaic 1 Painted Burnished Ware, including shared motifs, such as interlocking linear patterns, and the placement of designs on the upper body wall of carinated vessels (Fukai, Horiuchi, and Matsutani 1973:pls. IIIj, XLVII:10; Delougaz and Kantor 1972b:pl. VI:i; Kantor 1976c:fig. 30).

A Mushki design composed of Y figures strung together in parallel rows (pattern p-24 or Y2; Fukai, Horiuchi, and Matsutani 1973:pls. L, XLVII:6) also occurs in red-on-buff at Qal^{c}eh Rostam II in the Bakhtiari Mountains (Zagarell 1982:fig. 9:1) and Tepe Guran R-O (Archaic Painted Ware; Mortensen 1963:fig. 15). Matsutani (Fukai, Horiuchi, and Matsutani 1973:82) draws attention also to the tendency toward diagonal patterning shared by Mushki, Jarmo, Sarab, and Guran. But while Mushki and Qal^{c}eh Rostam II may be related to the Zagros group ceramic tradition, it is highly unlikely that they are contemporary with the early part of the Zagros sequence. Vessel forms, the burnished red slip, and painted linear designs with crosshatching all suggest that Mushki and Qal^{c}eh Rostam II are contemporary with the latest part of the Zagros Neolithic tradition, including the Red Burnished Ware phase in Hulailan, Late Sarab, and the Zagheh Archaic (see "Central Western Iran").

The relationship between Mushki ceramics and Tepe Sialk is a key issue in previous discussions (Fukai, Horiuchi, and Matsutani 1973:74–83). While there are stylistic links between Jari Ware and Sialk I_{3-5} (see below, "Jari Period"), there are good reasons for placing this deposit at Sialk contemporary with the Mushki period. First, Jari Ware does occur in small quantities in the strata dominated by Mushki Ware (Fukai et al. 1973:32, 78); thus the excavated Mushki period deposits, containing the earliest Jari Ware, could be contemporary with Sialk I_3. Second, a single specialized design, a reserved zigzag in a crosshatched band, also links Mushki and Sialk I_3 (Fukai, Horiuchi, and Matsutani 1973:pl. XX:4; Ghirshman 1938:pl. XLI:A11). Third, Mushki pottery is generally quite different in shape and design from Sialk I_{1-2}, an exception being a carinated bowl from Sialk I_2 (Ghirshman 1938:pl. XXXIX:S1517). If we consider that there are no more than 2 m of Mushki deposit at the type site, and that Sialk I_3 is nearly 3 m in depth, an equation of the two is reasonable (Fukai, Horiuchi, and Matsutani 1973:pl. XLVI; Ghirshman 1938:pl. XXXVI).

The high frequency of geometric microliths (crescents and trapezes) at Mushki (Fukai, Horiuchi, and Matsutani 1973:pls. XXXII, XXXIII:1, LII:31–45, LIII:1–7) is duplicated within the Deh Luran sequence only during the Sefid and Surkh phases (Hole 1977:table 40; Hole, Flannery, and Neely 1969:table 5). To the northeast, geometrics are reported from Sang-i Chakhmaq East (Masuda 1974a:fig. 4:10) and Djeitun (Masson 1971:pls. XVIII–XX). "Cosmetic mortars" that appear in Sialk I_3, Sang-i Chakhmaq East, and Djeitun occur at Mushki, where they have been called "ear plugs" (Fukai, Horiuchi, and Matsutani 1973:pls. LIV:1–24, LV:7–8; Ghirshman 1938:pl. LII:37–39; Masuda 1974a:fig. 4:11; Masson 1971:pls. XL:13–15, XLI:5–6). The clay and stone cones from Mushki, elsewhere referred to as "miniature pestles or mullers" or "nail-shaped labrets," occur in Sialk I, Sang-i Chakhmaq East, and Djeitun (Fukai, Horiuchi, and Matsutani 1973:pl. LV:10–14; Ghirshman 1938:pl. LII:26–31; Masuda 1974a:fig. 4:16; Masson 1971:figs. XL:1–5, XLI:16–17). In Deh Luran, mullers/labrets occur at Chagha Sefid primarily in the Sefid phase, but have a second peak of popularity in the Sabz and Khazineh phases at Tepe Sabz (Hole 1977:234, fig. 87e–h, pl. 54b–c, table 74; Hole, Flannery, and Neely 1969:237, fig. 102h). Concave-sided or spool-shaped labrets/ear plugs (Fukai, Horiuchi, and Matsutani 1973:pls. LIV:27–66, LV:5, 60) fall within the range of variation illustrated for "stud-shaped labrets" at Chagha Sefid (Hole 1977:pl. 54d); they may also be related to the oval, concave-sided "cuff link" labrets in Deh Luran, common from the Mohammad Jaffar to the Chogha Mami Transitional phases, but most frequent in the Sefid and Surkh phases (Hole, Flannery, and Neely 1969:237, fig. 102a; Hole 1977:237, fig. 92m; compare Fukai, Horiuchi, and Matsutani 1973:fig. LIV:61–64). Another widespread artifact type with a long history is the "grooved polisher" or grooved stone; these occur in Mushki (Fukai, Horiuchi, and Matsutani 1977:pl. LV:65–66), the Sefid and Surkh phases (Hole 1977:211, pl. 50p–r, fig. 86i), and Sialk II_1 (Ghirshman 1938:pl. LIII:16). Similar objects occur much earlier at Zarzi, Zawi Chemi, Shanidar, Jarmo, Asiab, and Guran (Hole 1977:211–12; see also Solecki and Solecki 1970; Voigt 1983:203). The bone sickle haft from Mushki (Fukai, Horiuchi, and Matsutani 1973:pls. XXXVI:1, LVI:1) is closely paralleled at Sang-i Chakhmaq East (Masuda 1974a:fig. 4:3; see also fig. 4:1–2, 4) and bears a general resemblance to those from Sialk I_1 (Ghirshman 1938:pls. LIV:I–III) and Djeitun (Masson 1971:pl. XIV top).

To summarize, a series of nonceramic artifacts from Mushki are paralleled in the Sefid-Surkh phases in Deh Luran. These support the relatively weak ceramic evidence linking Mushki and Chogha Mish Archaic 1, since the contemporaneity of Surkh and Chogha Mish Archaic 1–2 has been independently established (see "Deh Luran" and "Eastern Susiana"). Given the argument above for the contemporaneity of Mushki and Sialk I_3, and the presence of imported sherds of Sialk I_{3-4} and perhaps Sialk II sherds in the Surkh and Chogha Mami Transitional periods at Chagha Sefid (see "Deh Luran"), it seems likely that Mushki is contemporary with the Sefid phase, and the early part of Chogha Mish Archaic 1. The ground stone, clay, and bone artifacts provide direct evidence relating Mushki to sites on the plateau, including Sialk I, Sang-i Chakhmaq East, and distant Djeitun.

B. *The Jari period* is defined by Jari Mound B, and Jari Mound A:level AIII (Egami et al. 1977:1). Jari Painted Ware has red, black, or brown designs on a smooth surface that has sometimes been coated with a thin white slip (Sumner 1972a:37, 1977a:295; see also Egami, Masuda, and Gotoh 1977:pl. V; Egami and Masuda 1962:fig. 22; Fukai, Horiuchi, and Matsutani 1973:33–34, pls. XXIII–XXIV; Sumner 1972a:pl. IV). Sherds of unpainted, "roughly made" jars and basins also occurred (Egami 1967:2938; Egami, Masuda, and Gotoh 1977:pl. V:33, 38–39).

Sumner sees "generalized parallels" for Jari pottery in the Susiana Archaic period and at Qal^ceh Rostam (Sumner 1980:2). Most scholars have compared Jari Painted Ware with Sialk I (Mellaart 1975:190; Sumner 1972a:56; Vanden Berghe 1954:400). Although the number of shared motifs is not large, some are unusual and cluster in Sialk I_4: parallel lines joined by short cross bars and arranged diagonally or in chevrons (Egami, Masuda, Gotoh 1977:pl. V:12, 19, 22; Fukai, Horiuchi, and Matsutani 1973:pl. XXIV; Ghirshman 1938:pl. XLIV:A5, B4; Sumner 1972a:pl. IV:H–J); diagonal hatching cut by irregularly spaced crosshatch (Fukai, Horiuchi, and Matsutani 1973:pl. XXIII:2:11; Ghirshman 1938:pls. XLII:D13, XLIII:A14); and thick annular bands at the rim (Egami, Masuda, and Gotoh 1977:pl. V:30; Ghirshman 1938:pl. XLIV:B18; Sumner 1972a:pl. IV:D, K).

Small finds are similar to those of the Mushki period (Egami 1967:2939; Egami, Masuda, and Gotoh 1977:pl. VI:7–14). A domed "stud-shaped" labret (Egami, Masuda, and Gotoh 1977:pl. VI:12) finds an exact parallel in the Surkh phase at Chagha Sefid (Hole 1977:237, pl. 54d–e, fig. 92k–l), but is also found in a later Susa A context at Jaffarabad 3 (Dollfus 1971:fig. 21:19). Given the artifact comparisons presented here, it seems likely that the Mushki and Jari periods followed one another closely in time and were of short duration.

C. *The Shamsabad (Bakun BI) period* is defined by excavations at Tal-i Bakun Mound B by the Oriental Institute of Chicago (Schmidt 1937:27, 1939b:124; McCown 1942:23) and the Tokyo University Expedition (Egami and Masuda 1962). The 1937–39 Chicago excavation at Bakun B found a small number of sherds of a coarse, plain pottery in the strata from virgin soil to a thick layer of ash; above the ash, painted pottery appeared (McCown comments, 1941; documented in files of R. H. Dyson). The Chicago expedition called the lower or earlier part of the deposit level BI, and the term Bakun BI was later used for the entire phase within the Fars sequence. The Japanese excavation of 1956, however, *reversed* the numbering of stratigraphic units, naming as "Level I" the upper or painted pottery phase and referring to the lower phase as "Level II" (Egami and Masuda 1962:fig. 4). This chapter uses the original Chicago numbering for the levels at the site and adopts the name "Shamsabad" for the phase within the Fars sequence as suggested by Sumner (1972a, 1980). Shamsabad occupations have also been documented at Tal-i Jari A in level AII (Egami, Masuda, and Gotoh 1977:7, pl. II; see also Sumner 1977a:300, 1980:2–3).

Shamsabad Ware, Pottery Group B2 of the Japanese excavators and formerly referred to as "Bakun BI Plain Ware," is tempered with large pieces of chaff and is poorly fired to a light brown (Egami, Masuda, and Gotoh 1977:2–3, pl. IV:5–8; Egami and Masuda 1962:fig. 18; Sumner 1972a:37, 1980:2). Forms of decoration include a single incised line around the rim (Sumner 1972a:pl. V:R), application of knobs or wavy lines (Egami, Masuda, and Gotoh 1977:pl. IV:1–2), and painting with a "purple" or "fugitive red" paint (Egami and Masuda 1962:4–5; Egami, Masuda, and Gotoh 1977:pl. IV:3; Sumner 1972a:38, pl. III:L).

There are no good parallels in the lowlands for Shamsabad Ware, although a general relationship can be cited with the chaff-tempered plain wares that are associated with Susiana Black-on-Buff painted wares in Khuzistan (Sumner 1980:3; see "Susiana"). Plain large bowls in *pâte grossière* similar to those typical of Shamsabad are found in Jaffarabad 6–4 (Dollfus 1975a:figs. 10, 12:1–2; Egami and Masuda 1962:fig. 18; Egami, Masuda, and Gotoh 1977:2, pl. IV). The plan of a three-room building in Jari AII has been compared with the Eridu XVI temple (Egami, Masuda, and Gotoh 1977:7; Safar, Mustafa, and Lloyd 1981:fig. 39), which is contemporary with the Jaffarabad period (Dollfus 1983:table 42). Ties between the Shamsabad period and Kirman also occur (see "Southeastern Iran").

D. *The Bakun period* is characterized by the distinctive painted pottery originally found in Tal-i Bakun A (Langsdorff and McCown 1942). Well known from surface survey (Kole 1980; Sumner 1972a:39; see also Stein 1936, 1937, 1940; Vanden Berghe 1959:37–42), Bakun material has been excavated at Tal-i Bakun (Egami and Masuda 1962; Herzfeld 1932; Langsdorff and McCown 1942; Schmidt 1939b), Tal-i Gap (Egami and Sono 1962), Tal-i Jari A (Egami, Masuda, and Gotoh 1977), and Tal-i Nokhodi (Goff 1963, 1964). The period is very long as indicted by deposits of 10 m or more at some sites (Kole 1980). It can be subdivided into three subphases based on ceramic attributes (Dyson 1965), but the boundaries between these phases are not clear-cut. For example, the Middle Bakun phase is based primarily on changing design frequencies at Gap (Egami and Sono 1962:table 1), but the conclusions drawn from the frequency chart do not match those that can be drawn from an examination of the published line drawings and plates, which are highly selective. Moreover, very few designs are sufficiently limited in their chronological distribution within the Bakun period to be useful for interregional comparison. A truly satisfactory distinction between Early and Middle Bakun must eventually be based on a study of changes in vessel forms and the grammar of designs, as well as design frequencies. The following discussion is therefore tentative.

1. *The Early Bakun phase* is defined by Tal-i Bakun BII (Schmidt 1939b; McCown 1942; Egami and Masuda 1962, where these deposits are referred to as "Bakun B level I") and Tal-i Jari AI (Egami, Masuda, and Gotoh 1977). The latest part of this phase is represented by Tal-i Gap Ia–b, and perhaps the beginning of II (Egami and Sono 1962; Dyson 1965:243). Deposits of this phase contain the coarse, chaff-tempered Shamsabad Ware characteristic of the preceding period (Egami and Masuda 1962:4–5, fig. 19: Pottery Group B2; Egami, Masuda, and Gotoh 1977:1, pl. III:21–33; Egami and Sono 1962:fig. 11:6), accompanied by a variant of Bakun Painted Ware, buff-slipped with a burnished or brush-marked surface (Pottery Group B1: Egami and Masuda 1962:4–5, pls. II, V, figs. 13–17; Egami, Masuda, and Gotoh 1977:pl. III; see also McCown 1942:23).

Although many of the designs and vessel forms of Early Bakun continue in Middle Bakun, at least one ceramic parallel relates the Early Bakun phase to the Early and Middle Chogha Mish phases in Susiana. Large jars with ovoid bodies that are often decorated with isolated motifs on the shoulder and with straight everted necks painted as a solid zone occur in Gap Ia–b (Egami and Sono 1962:fig. 25:2–3) and in Jowi 11–12 (Dollfus 1983:figs. 28:3, 30:13, 33:17), Bendebal 21–16 (Dollfus 1983:figs. 61:13, 76:11, 14–15, 78:1–4), and Jaffarabad 3m–n (Dollfus 1975a:fig. 52:14–18). Also popular at Gap in I–IIa, Jowi 11, and Bendebal 24–22 were deep bowls decorated in a wide zone composed of thick and thin annular bands with a central band of geometrical elements (Egami and Sono 1962:figs. 21:1, 7, 22:3, 5–6, table 1; Dollfus 1983:figs. 31:3, 8–11, 56:4–5, 12, 60:12).

Concave-based whorls with bold painted designs link Early/Middle Bakun and the Chogha Mish period (Gap I–II: Egami and Sono 1962:pl. XL:10–15, fig. 32:1–6; Jowi 13, 7, Bendebal 17b, 16: Dollfus 1983:figs. 43:5–6, 93:2–6). Similar but not identical whorls were found in Deh Luran from Mehmeh through Bayat (Hole, Flannery, and Neely 1969:205, fig. 89a–d). Biconical whorls with notched edges occur in Gap I–II (Egami and Sono 1962:pl. XL:2–3, fig. 32:8–10), Jowi 10 (Dollfus 1983:fig. 43:4), Bendebal 27–11 (Dollfus 1983:fig. 93:1, 94:6), and in the Bayat phase at Tepe Sabz (Hole, Flannery, and Neely 1969:fig. 90e).

2. *The Middle Bakun phase* is defined by the earliest deposits in the Chicago excavations at Bakun A, levels AI–II (Langsdorff and McCown 1942), and by Tal-i Gap IIa, levels 12–10 (Egami and Sono 1962). The Japanese excavation in Bakun A was located on the lower edge of the mound (Egami and Masuda 1962:1, fig. 3; Langsdorff and McCown 1942:fig. 2); the excavated strata were numbered I–IV, with I at the top of the deposit, again *reversing* the sequence established by Chicago. On the basis of painted walls and the orientation of a building found in his level IV or the earliest deposit excavated, Egami correlates it with level AIII of the Chicago excavation, located 50 m away and at a higher absolute level (Egami and Masuda 1962:1). The published pottery, however, is more directly related to Chicago's Bakun AI and AII; we therefore include the Japanese Mound A excavation within the Middle Bakun phase.

The handmade Buff-Slipped Ware of Bakun A, or Pottery Group A-1 in the Japanese report, is a continuation of the painted ware present in Early Bakun (Egami and Masuda 1962:2–3, figs. 6–11; Langsdorff and McCown 1942:pls. 15:1, 17:10, 76:16). Painted Buff-Slipped vessels carry designs composed of motifs set in one to three horizontal registers, covering one-half or more of the exterior (Langsdorff and McCown 1942:59–60, pls. 35:5, 36:4, 37:12, 43:14, 45:2, 47:9, 48:12–13, 49:1, 53:14, 59:13, 67:7, 68:1, 70:15, 72:18, 73:7, 76:16, 78:27). Motifs characteristic of Middle Bakun are mainly geometric, but highly stylized humans, caprines, ticks, flying birds, fish, and plants also occur (Egami and Masuda 1962:fig. 9; Egami and Sono 1962:table 1:designs Ig, XIII; Langsdorff and McCown 1942:pls. 67:4–5, 69:15, 71:7, 9, 76:9, 15, 78:2–4, 6–9). Found in Bakun AI–II, and characteristic of Gap IIa, is a variety of circular Maltese cross patterns (Egami and Masuda 1962:figs. 6:8, 7:17; Egami and Sono 1962:table 1:designs IIb, IIc, fig. XXXIII:6; Langsdorff and McCown 1942:pls. 42:9, 43:4, 48:15, 55:14, 72:4, 78:26–27).

Middle Bakun pottery has specific parallels with the middle and late Chogha Mish period at Bendebal and Jowi: large jars with straight or ridged high collars and isolated swastika motifs on the body (Langsdorff and McCown 1942:pl. 44:7; Dollfus 1983:fig. 78); deep bowls with flaring sinuous sides (Egami and Sono 1962:fig. 14:7; Langsdorff and McCown 1942:pl. 76:16; Dollfus 1983:fig. 36:7); and lines of painted dots (Langsdorff and McCown 1942:figs. 42:5, 48:12, 49:11, 62:7; Dollfus 1983:fig. 82:2). Dotted motifs also occur in Early and Middle Farukh (Wright 1981:fig. 17, table 8) and are considered a particularly useful chronological marker within Khuzistan by Dollfus (pers. comm. 1985). An identical and complex design composed of annular bands and alternating solid and dash-filled rectangles that has its greatest frequency in Gap IIA also occurs in Middle Farukh (Egami and Sono 1962:table 1, design Ic5; Wright 1981:fig. 18f). A second complex design links Gap IIa and Bendebal 14 (Egami and Sono 1962:fig. 14:7; Dollfus 1983:fig. 82:8). The conical-based bowls that begin in Bakun AI (Langsdorff and McCown 1942:pl. 71:7) may be related to conical bowls at Farukhabad (Wright 1981:table 8, fig. 13–14), but the relatively narrow Farukh vessels have better parallels in Late Bakun. To the east, Middle Bakun is firmly linked to Tal-i Iblis II (see "Southeastern Iran").

3. *The Late Bakun phase* is defined by Bakun Mound A levels III–IV (Langsdorff and McCown 1942) and Tal-i Gap IIb–c (Egami and Sono 1962). Late Bakun Painted Buff Ware is elaborately decorated with geometric and representational designs that often cover the entire vessel and sometimes appear as negative patterns. Carefully formed by hand, they are sometimes extremely thin walled (Langsdorff and McCown 1942:24–25, 60–61, pls. 1–4, 9–80). At Bakun a Red Burnished Coarse Ware that is chaff-tempered and poorly fired also occurs (Langsdorff and McCown 1942:26, pls. 17:24–28, 18:1, 4, 13).

A number of ceramic parallels link the Late Bakun phase to Middle and Late Farukh in Deh Luran: an open bowl with incurved rim decorated with spiral ibex horns and maltese cross (Langsdorff and McCown 1942:pl. 71:7; Wright 1981:fig. 22f, Late Farukh); tall, narrow conical cups with rounded bases (Langsdorff and McCown 1942:pl. 2:7, 16:7; Wright 1981:fig. 14a–b, Middle Farukh);* open bowls with low ring bases painted with a bands or straight and/or wavy lines (Langsdorff and McCown 1942:pls. 52:3, 61:1, and Wright 1981:fig. 12c–d; Egami and Sono 1962:pl. XXIII:5, table 1:design Ia2, and Wright 1981:fig. 15h, table 8; Egami and Sono 1962:fig. 18:1–2, table 1:design IXc, and Wright 1981:fig. 22a, table 8); and holemouth jars, sometimes with applied knobs (Egami and Sono 1962:pl. XX:5; Langsdorff and McCown 1942:pl. 12:5–7, 17:27; Wright 1981:fig. 10a–c, f, h, Middle Farukh). Within Susiana, some of the same or related forms are found in middle and late Chogha Mish contexts at Bendebal and Jaffarabad: tall conical cups (Langsdorff and McCown 1942:pl. 16:6; Dollfus 1975a:fig. 47:7, 12; 1983:fig. 83:2), open bowls with ring bases and painted band (Dollfus 1975a:fig. 47:19–22; 1983:figs. 74:8, 82:1, 84:3); and holemouth vessels (Dollfus 1975a:fig. 53:1). In addition, necked jars with out-turned rims occur in Jaffarabad 3 m–n (Dollfus 1975a:fig. 53:5) as well as Bakun AIV (Langsdorff and McCown 1942:pl. 12:13). A highly stylized representation of a mouflon head from a Susiana d/late Chogha Mish context at Tepe Bouhallan is very like one from Bakun A III (Langsdorff and McCown 1942:pl. 71:15; Amiet 1966:fig. 10). Although the painting styles are quite different, some parallels link Late Bakun and Susa A: tall goblets with a decorated zone extending over the entire vessel (Langsdorff and McCown 1942:pls. 40:6, 54:15, 67:13; Amiet 1966:fig. 13; Dollfus 1971:fig. 14; Canal 1978a:fig. 25:1) and snake motifs, including snakes bordered with dots (Langsdorff and McCown 1942:pls. 77:6–7, 9; Amiet 1966:fig. 11).

Evidence for the contemporaneity of Late Bakun with Middle-Late Farukh and late Chogha Mish–Susa A also comes from other artifacts. A relatively large sample of stamp seals recovered from Bakun A III–IV (Langsdorff and McCown 1942:65–68, pls. 7:11–19, 8:1–11, 81:15–33, 82:1–26; Schmidt 1939b:fig. 93) includes low and high hemispheres with pierced tabs, hemispherical and lenticular seals pierced longitudinally, and conical seals with convex faces. The shape of the seal face is highly variable and may be round, oval, subrectangular, triangular, or fan-shaped; designs tend to be quartered patterns and may be deeply cut. Hemispherical seals with tab handles and quartered patterns like those in Late Bakun occur in the Middle Farukh at Farukhabad (Wright 1981:fig. 29d; see Langsdorff and McCown 1942:pl. 81:17–18) and in Susa Acropole I:25 (Le Brun 1971:fig. 35:6; see also Amiet 1972:5–32). Longitudinally pierced lenticular and hemispherical seals with incised quartered patterns are found in Susa A (Dollfus 1971:fig. 23:3, 1978b:fig. 20), as well as sites in the Zagros (see "Central Western Iran") and in Sialk III$_{1-7}$, especially III$_{4-6}$ (Ghirshman 1938:pl. LXXXVI). At Tepe Gawra they are found in levels XIX to X-A, with a cluster in XI-A that includes tanged and longitudinally pierced seals with a wide range of patterns comparable to those in Bakun AIII–IV (Tobler 1950:pls. CLVIII:1, 8, 12–15, CLX:31–33). Clay labels and jar stoppers appear in Fars during

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*Some vessel forms of the Late Bakun phase have a long duration in the lowlands. For example, a variant of the conical cup with rounded base continues into the Early Dynastic period in the Diyala (Langsdorff and McCown 1942:pl. 15:8; Delougaz 1952:pl. 50b); bell-shaped cups (Langsdorff and McCown 1942:pl. 12:3–4) occur at Eridu from Ubaid 2 through 4 (Oates 1960:Type 13a); high-collared jars with globular bodies, present throughout the Bakun period, also occur throughout the Chogha Mish and Susa A periods in Khuzistan (Dollfus 1978b:figs. 16–19; Le Brun 1978c:fig. 30:12) and in Ubaid 1–3 (Oates 1960:type 5). Such forms have limited value for chronology and are cited here only when the parallel involves a combination of form and painted design.

Bakun AIII–IV (Langsdorff and McCown 1942:66–67, 72, pls. 7:13, 15–19, 83:8–9, 12). At Jaffarabad, jar stoppers appear in Susa A (Dollfus 1971:fig. 27:6), while in Deh Luran they do not occur before the Bayat phase (Hole, Flannery, and Neely 1969:247, fig. 103p).

Plain and painted clay figurines from Late Bakun contexts include representations of animals and humans, primarily females with small conical breasts (Langsdorff and McCown 1942:61–65, pls. 5:4–19, 6:1–27, 7:1–10). Several heads in the form of elongated cones with pinched faces and slanted incised eyes found in Bakun AIII (Langsdorff and McCown 1942:pl. 7:24–27; Schmidt 1939b:129, fig. 94:top, TBA 68) have been compared to Ubaid figurines from Ur and Eridu (Schmidt 1939b:129). Although this comparison is very generalized, it is supported by body fragments from standing figures with separately modeled legs and a fragment with broad shoulders decorated with applied pellets that are similar to the Ubaid standing figurines (Langsdorff and McCown 1942:pl. 6:18, 21, 24–26, 7:1; see Safar, Mustafa, and Lloyd 1981:fig. 116:3–4; Woolley 1955:pl. 20). Parallels for columnar, stub-armed figurines from Bakun are found in Susa A (Langsdorff and McCown 1942:pls. 6:17, 7:7, 10; see Amiet 1966:figs. 18–19; Dollfus 1971:pl. IX:5, fig. 22:2). Also making their initial appearance in Susa A and Late Bakun are figurines of birds (Langsdorff and McCown 1942:pl. 5:4–6; see Dollfus 1971:fig. 22:4, 6–7, 9, 12; 1978b:fig. 20).

Biconical whorls with notches or incisions around their edges link Bakun and the Bayat period at Tepe Sabz (Egami and Sono 1962:fig. 32:8, 12; Langsdorff and McCown 1942:69, pls. 8:16, 82:28–31, 34–36; Hole, Flannery, and Neely 1969:fig. 90d–e). In Susiana they occur in the Chogha Mish period at Jowi and Bendebal (Dollfus 1983:figs. 43:4, 94:2–4, 6), and in the Susa A period at Jaffarabad (Dollfus 1971:fig. 21:2, 4, 6; see Langsdorff and McCown 1942:pls. 8:16, 82:29, 30, 35; Egami and Sono 1962:fig. 32:8–9, pl. XL:2–4).

To summarize, a series of diverse parallels can be drawn between the Late Bakun phase, the Middle-Late Farukh phase in Deh Luran, and the Middle to Late Chogha Mish and Susa A periods in Khuzistan. The comparisons that are most specific and limited in time, however, suggest that Late Bakun is contemporary with Middle and/or Late Farukh and Susa A.

E. *The Lapui period* was defined by Sumner (1972a:40–42, pls. XII–XVIII) based on survey material from the Marv Dasht; a small sample of sherds from the surface of Bakun A and from the latest excavated deposit, AV (Langsdorff and McCown 1942:32–33; McCown 1942:48–49; Schmidt 1939b:123; Sumner 1972a:40); and sherds from Mounds C to G in the Tal-i Gap group (Sono 1967:2940). Material stratified beneath Banesh deposits at Tal-i Kureh, assigned to a "Terminal Lapui phase" by Alden (1979:154–56, fig. 52), is better treated as Early Banesh (Sumner 1986).

Lapui Fine Ware, equivalent to typical Bakun AV Red Ware, is smoothed or roughly burnished; it sometimes has a red slip over a buff paste. Lapui Common Ware has a red paste; the smoothed or burnished surface is frequently crazed or pitted (Sumner 1972a:41–42). Vessel forms include beakers, open bowls, incurved bowls, holemouth vessels, and jars with sharply everted rims (Egami and Masuda 1962:fig. 12:14–19; Langsdorff and McCown 1942:pls. 20–21; Sumner 1972a:41–42, pls. XII–XVI, XVII:J, L–N, XVIII:G–J). Incised or painted sherds are extremely rare (Langsdorff and McCown 1942:pl. 21:13; Sumner 1972a:pls. XV:M–N, XVI:I). On one site Lapui Ware was found associated with pottery that had red, brown, or black painted designs on a buff paste, designated as Asupas Ware (Sumner 1972a:42, pl. XVII:A–F, O–R).

Strong parallels in vessel form occur between Lapui and Susa Acropole I:25–24, the late Susa A Period (Sumner 1980; compare Langsdorff and McCown 1942:pl. 20:13, and Le Brun 1971:fig. 39:10; Langsdorff and McCown 1942:pl. 20:8, and Le Brun 1971:fig. 39:3–5). Wright states that "the minority redwares of Susa 24–25 duplicate in form and fabric the ceramics of the Lapui Phase" (1978:233); he places late Lapui contemporary with Early Uruk in Khuzistan (Susa Acropole I:22; pers. comm. 1984; 1978:fig. 5). Related material has also been recovered from the surface of sites in the Bakhtiari Mountains (Sumner 1980; see Zagarell 1982:50, figs. 29:1–7, 30). Continuing to the northwest, a tall Red Ware vessel from an unknown provenience at Bakun (Langsdorff and McCown 1942:pl. 20:21) is identical in form to the red-slipped and burnished S-walled jars of Godin VII (Levine and Young 1987:35, fig. 16:5; see also Young and Levine 1974:fig. 13:6). To the east, Lapui ware occurs at Iblis in periods I–II, and in Yahya VI–VA2 (see "Southeastern Iran").

F. *The Banesh period,* originally defined on the basis of surface material collected by Sumner (1972a:40–41, 42), has now been firmly established by excavations at Tal-i Kureh (Alden 1977) and at Tal-i Malyan or ancient Anshan (Sumner 1974, 1976, 1985; Nicholas 1980). It can be divided into three phases based on ceramics within which two major groups have been distinguished: Banesh Chaff-Tempered Ware, dominant throughout the period (Alden 1979:211; Nicholas 1980:486); and Banesh Grit-Tempered Ware (Alden 1979:209; see also Nicholas 1980:555–57, tables 79–80). The latter may be slipped and decorated with black, white, and/or red paint (Alden 1979:209–10; Sumner 1972a:42–44).

1. *The Early Banesh phase,* which includes Alden's "Terminal Lapui," "Initial Banesh," and Early Banesh phases (Sumner 1986), is defined by a small sounding at

Tal-i Kureh (site 7F1; Alden 1977, 1979:50, 155–56). Ceramic parallels strongly relate Early Banesh to Susa II, or Acropole I:18–17 (Alden 1979:60). These include two variants of "pinched-rim bowls" (Alden 1979:fig. 36:3–23; Le Brun 1971:fig. 45:11, 1978b:fig. 19:10); Banesh trays (Alden 1979:fig. 33; Le Brun 1978b:fig. 23:7–9); folded-rim jars (Alden 1979:fig. 31:17–20; Le Brun 1978b:fig. 25:2, 8, 11–13); straight-sided goblets and flat goblet bases (Alden 1979:figs. 31: 31–47, 32:1–9; Le Brun 1971:fig. 47:6-7, 1978:fig. 20:9); straight-sided open bowls with incised wavy line below the rim (Alden 1979:fig. 40:15; Le Brun 1971:fig.46:11); and black-on-white painted bands (Le Brun 1971:fig. 53:4). Non-ceramic parallels between Early Banesh and Khuzistan are limited to a stone macehead with four grooves from the surface of Site 10I3L that is duplicated in Susa Acropole I:17A (Alden 1979:fig. 57:21; Le Brun 1971:fig. 55:2).

2. *The Middle Banesh phase* includes material designated by Alden as Early-Middle and Late-Middle Banesh; it is defined by building levels TUV:1–3 and ABC:2–5 at Tal-i Malyan (Nicholas 1980, 1981; Sumner 1974, 1976, 1986). Area TUV and ABC 4 were the locus of domestic and craft activities, while in ABC 2–3 there were large-scale formal structures (Nicholas 1980; Sumner 1976, 1986). Malyan was at this time a small city of ca. 45 ha (Sumner 1986).

Middle Banesh ceramics have parallels with both Susa II (Acropole I:18–17) and Susa III (Acropole I:16–14B; Ville Royale I:18–13). In use at Malyan were several variants of jars with four nose lugs, also found in Acropole I:17–18 (Nicholas 1980:508, 558, fig. 159; Sumner 1976:fig. 7a; see Le Brun 1971: figs. 50:1, 3–4, 51, 53:1, 3–4; 1978b:figs. 24:4, 12, 32, 33:4, 7; 1978c:figs. 32:10–11, 14, 34:9–10, 14); at Farukhabad vessels combining four nose lugs with painted triangles on the shoulder occur in both Middle and Late Uruk contexts (Wright 1981:111, fig. 57d, h). Deep beveled-rim bowls first appear in the Fars sequence during Early Banesh, already established as contemporary with Susa II (see above); they have their maximum popularity during the Middle Banesh phase, with a decline from TUV level III to I (Nicholas 1980:361, 364, table 82, fig. 154c). In Khuzistan, beveled-rim bowls are most frequent in Susa II (Le Brun 1978b:fig. 20:8, 1978c:fig. 34:1); Le Brun (1978c:192) implies that these do not occur after Acropole I:level 17 (i.e., after Susa II), but according to Carter this type is still "relatively common" in Ville Royale I:18–16 or Susa IIIB (1978:fig. 40:2–3; see also *grossen blumentöpfe* type 8a from Warka; Nissen 1970:table 104). At Farukhabad, beveled-rim bowls are common in Middle Uruk and remain so in Late Uruk, declining in frequency in the Jemdet Nasr phase (Wright 1981:tables 40–41). Late occurrences of beveled-rim bowls are reported for at least one Mesopotamian site: at Nippur they survive into Jemdet Nasr and the transition into Early Dynastic I (Hansen 1965:202, 208). Finally, low-rimmed trays continue as common forms in Middle Banesh (see Early Banesh above), but at Susa they are common only in Susa II, Acropole I:18–17, and all but disappear by Acropole I:14A-13 (Le Brun 1971:203; see also *blumentöpfe* type 2 at Warka; Nissen 1970:table 104).

Characteristic of Middle Banesh and Susa Acropole I:16–14B are pedestal-based goblets (Nicholas 1980:fig. 155 [hollow-based], fig. 156a–b [solid-based]; see Le Brun 1971:192, 199, 203, fig. 60:1–4; 1978c:fig. 36:4). The chronological distribution of these goblets is apparently linked to that of beveled-rim bowls (see Nicholas 1980:561, 564, 568, 581): in TUV, goblets increase in frequency from level III–I, as BRBs decline; at Farukhabad, the pattern is repeated, with solid-footed goblets becoming common in the Jemdet Nasr period and persisting into Early Dynastic I (Wright 1981:169, tables 40–41). Also occurring in Susa I:16–14A are jars with rolled or expanded rim (Nicholas 1980:figs. 164, 165a; Le Brun 1971:fig. 61:11–13); flaring-sided bowl/cups (Nicholas 1980:fig. 166a–d; Le Brun 1971:figs. 60:7–9, 65:9; see also *blumentöpfe* types 3–5 at Warka, Nissen 1970:table 104); horizontal bar lugs (Nicholas 1980:89; Le Brun 1971:fig. 65:14); and crescent lugs placed at the rim or lower on the body (Le Brun 1971:figs. 60:21, 65:13).

To summarize, while some ceramic forms characteristic of Susa II occur in the Middle Banesh phase of Fars, associated Middle Banesh forms are found only in Susa IIIA. Given the entire pattern of ceramic distribution, an equation of Middle Banesh and Susa III is quite convincing. Using the Farukhabad material to link Middle Banesh with the Mesopotamian sequence, it is contemporary with Jemdet Nasr and may last into the Early Dynastic period (Alden 1979:fig. 12; Nicholas 1980:86–96; Sumner 1986). This dating is strongly supported by both tablets and glyptic evidence. The signs on the Malyan tablets are comparable to the Proto-Elamite A script from Susa found in Acropole I:16–14B, and the Malyan glyptic is closely paralleled stylistically in the same levels (Carter 1984:119, with refs., 1980:fig. 17:3, 7; Pittman 1980; Sumner 1986).

3. *The Late Banesh phase* is known from surface survey (Alden 1979:51–52), from Malyan test H5, and from Malyan By8 along the southern city wall. It is also possible that TUV level I should be placed in this phase. The fortification of Malyan during Late Banesh is interesting in light of the intrusion of Mesopotamian rulers into Elam during the Early Dynastic Period. Indeed Gudea boasts of having "conquered with weapons the town of Anshan (Kerd Malyan) in Elam" (Hinz 1972:70).

Although a low percentage of Chaff-Tempered Ware vessels including standard Middle Banesh forms were found in the Malyan city wall sounding By8, diagnostic types for Late Banesh are of Grit-Tempered Ware (Alden 1979:51, fig. 42; Sumner 1985:156, figs. 3–4, pl. Ib). Ceramic parallels occur in Susa Acropole I:15–14A and Ville Royale I:18–13, dated to Susa III (Alden 1979:60, fig. 12). These include bowls with flattened rims decorated with simple incised lines (Alden 1979:fig. 42:9–10; Sumner 1985:fig. 4g–i; Carter 1980:fig. 10; Le Brun 1971:figs. 60:20, 65:15) and a painted carinated bowl with everted rim (Alden 1979:fig. 51:12; Carter 1980:fig. 15:12). Carinated vessels with painted bands from Malyan By8 are duplicated in Ville Royale I:12–10 (Sumner 1985:fig. 3l–n; Carter 1980:figs. 28:4, 29:1–3). Given the evidence relating Middle Banesh to Susa IIIA, a correlation of Late Banesh with Susa IIIB–IVA and by extension Early Dynastic I–III is suggested.

G. *The Kaftari period* is defined by excavations at Malyan and at Tal-i Nokhodi I–II (Goff 1964, pottery mistakenly identified with Bakun AV or Lapui Red Ware; Sumner 1972a:44, 1980:table I; see also Nickerson 1983:8; Stein 1936; Vanden Berghe 1954). The most common ceramic group is Kaftari Buff Ware, which occurs in plain and painted variants (Nickerson 1983:132; Sumner 1974:167). Designs include banded motifs and the famous fat Kaftari birds, which always fly left (Nickerson 1983:figs. 39–40; Sumner 1972a:pls. XXIII–XXV, 1974:167, figs. 6–7, pl. IVc–d). Kaftari Plain Buff Ware may be decorated with incised wavy lines, comb incision or finger impressions (Nickerson 1983:fig. 41; Sumner 1972a:pl. XXXI:A, D, 1974:167, fig. 8). Kaftari Red-Slipped Ware also occurs in both a plain and painted variety, and sometimes has plastic decoration (Nickerson 1983:134–35, figs. 39–41; Sumner 1972a:pls. XXVII:G, P, Q–R, XXVIII–XXIX, 1974:167, fig. 9c–f).

Artifact parallels linking Kaftari and Susa span a long period. Painted Buff Wares with geometric motifs and left-flying birds appear in Susa IVA or Early Dynastic III, and there is a general stylistic similarity to Kaftari (e.g., Carter 1980:fig. 28; Nickerson 1983:fig. 58a–i). Vessel forms differ, however, with the best parallels for the Kaftari forms occurring later in the Susa sequence. Low tripod bowls similar to those found at Malyan are found at Susa in the Shimashki period, which postdates the Ur III period in Mesopotamia (compare Sumner 1972a:fig. XXIX:O–P, 1974:fig. 8d; Carter 1984:fig. 10:4). Bowls with sharply incurved rims (Sumner 1972a:pl. XXVII:G, P–R) occur in Ville Royal I:4–3 or Susa VB, also dated to the Shimashki period (Carter 1980:fig. 45:1–3); similar examples are found at Tell Asmar in the Larsa period (Delougaz 1952:pl. 120c). Large storage vessels with impressed ridges and incised decoration are found in Ville Royale I:5–3 (Sumner 1972a:pl. XXXI:A–D, 1974:fig. 8g–h; Carter 1980:figs. 39:17, 49:18, 50:14–21). Sherds of Fine Gray Ware with "drilled and incised, sometimes white filled decoration" (Sumner 1974:170, fig. 10:a–c) have been identified as Isin-Larsa imports by Carter (1984:152; see Delougaz 1952:pl. 123). Tall sinuous-sided jars with pronounced ridges on the interior were found in Kaftari and in the Sukkalmah period at Susa, ca. 1900–1600 B.C. (Sumner 1974:fig. 8a–b; Carter 1984:fig. 10:9). This form also occurs at Tell Asmar in a Larsa context (Delougaz 1952:pl. 121e), as do shallow bowls with flat bases and wide ledge rims (Sumner 1974:fig. 8k; Delougaz 1952:pl. 148:B.061.210). One of the mold-made female figurine fragments from Malyan appears to duplicate a typical Sukkalmah figure (Sumner 1974:fig. 11o; Carter 1984:fig. 10:8).

Other evidence confirms a long duration for Kaftari. Although early reports based on the evidence from Operation ABC suggested a hiatus of unknown length, parallels with Susa IVA found in both Late Banesh and Kaftari (see above) suggest a gradual transition between phases (Alden 1979:51–52, n. 2). A *terminus post quem* for most of the excavated Kaftari material is provided by sealings with cuneiform inscriptions (Stolper 1976; Sumner 1977b:178), which indicate a date sometime after the ascendance of Sumerian influence at Susa and the introduction of cuneiform as the written script during period IVB ca. 2400 B.C. (Carter 1984:134; Vallat 1978:194). The cluster of strong parallels with the Susa Sukkalmah period indicate that Kaftari lasted well into the second millennium (see also R. Henrickson 1986b:fig. 3).

The Fasa-Darab Valley Sequence

Surveys carried out in the Fasa and Darab valleys to the southeast of Shiraz by Piere de Miroschedji (1971, 1972, 1974), supplemented by the earlier work of Aurel Stein (1936) and unpublished excavations by M. F. Tavallali of the Iranian Archaeological Service, document settlements contemporary with the Mushki/Jari, Bakun, Lapui, and Kaftari periods in the Marv Dasht (Miroschedji 1972; Sumner 1977a).

The Radiocarbon Evidence for the Southwestern Zagros

Only scattered dates are available for the early portion of the Kur River Basin sequence. The Banesh period, however, is dated by a large and consistent cluster of dates from Malyan. A total of twelve samples from Middle Banesh deposits in Operations ABC and TUV provides an average calibrated date of 3370–3050 B.C. This overlaps with the range suggested by two dates from contexts in the sounding at Tal-e Kure assigned to the Early Banesh phase on the basis of ceramics (table 2). Three more dates from Late Banesh deposits within the city wall also overlap. Thus the radiocarbon evidence for Banesh firmly dates this period to the late fourth millennium, but does not provide good evidence for its precise duration.

Another large suite of determinations from Kaftari deposits provides an average corrected range of 2120–1880 B.C. This is within the time period suggested by correlations with the historical sequence from Mesopotamia if the high chronology is adopted (Porada et al., this vol., chap. 5).

Southeastern Iran

Kirman: The Iblis Sequence

A study of the remains of the largely destroyed mound of Tal-i Iblis, located in the Bard Sir Valley south of Kirman, was undertaken by Joseph R. Caldwell in 1964 and 1966 (Caldwell 1967a, 1967b, 1967c; Caldwell and Malek Shahmirzadi 1966; Caldwell and Sarraf 1967; Chase, Caldwell, and Fehervari 1967; Evett 1967). The 1964 study collected a small sample of sherds and associated radiocarbon samples (table 2:P-924 through P-929) from a stratigraphic column; it defined a series of Iblis *levels 0–6,* with 0 at the bottom (Caldwell 1967a; Caldwell and Malek Shahmirzadi 1966). Excavations in 1966 using arbitrary digging units produced new Iblis *periods 0–VI,* each characterized by a "pottery complex" (Caldwell 1967b:32; Chase, Caldwell, and Fehervari 1967:112, fig. 1, table 1). This new, typologically oriented sequence is not interchangeable with that from 1964 (Caldwell 1967b:30–32; Chase, Caldwell, and Fehervari 1967:112). In the following discussion, each phase is strictly defined by those excavated units that seem most coherent. Even allowing for gaps, the sequence as presently known does not appear to represent any great length of time, since the total depth of deposit for Iblis I–IV is less than 4.5 m (Chase, Caldwell, and Fehervari 1967:fig. 1).

A. *The "Iblis 0 period"* was defined by the lowest 40–50 cm of excavation Area A:sections A and B (Caldwell 1967b:fig. 3; Chase, Caldwell, and Fehervari 1967:fig. 1). In this small test area, only Lalehzar Coarse Ware sherds were found. The absence of painted fine wares in this deposit was used by Chase to establish a "pure Lalehzar Coarse Ware horizon" (Chase, Caldwell, and Fehervari 1967:149–51). The other excavators, however, had reservations about the reality of Iblis 0, pointing out the strong possibility of sampling error given the volume of deposit excavated and the very small number of decorated sherds in Iblis I strata (Caldwell 1967b:32; Chase, Caldwell, and Fehervari 1967:149–50); for example, within the 96 m² of Iblis I floor deposits cleared in Area D, only one Bard Sir sherd was associated with 275 Lalehzar Coarse Ware sherds (Evett 1967:table 2). Based on the available evidence we conclude that Iblis 0 cannot stand as a time unit distinct from Iblis I, and this "period" should be rejected.

B. *The Iblis I period* is best documented by material on the floors of buildings in Areas B, D, F, and G (Caldwell 1967b:fig. 3). Up to 99 percent of the pottery sample from Iblis I consists of Lalehzar Coarse Ware, with very rare sherds of Bard Sir fine wares (Caldwell and Sarraf 1967:306; Evett 1967:table 8, 15; for Bard Sir, see below). Lalehzar Coarse Ware is a thick, heavily chaff-tempered ware covered with a slip (Chase, Caldwell, and Fehervari 1967:150, citing F. Matson).

In Kirman, Lalehzar Coarse Ware is paralleled in Yahya VIB to V (see "Southeastern Iran"). Martha Prickett (1986) points out that the Lalehzar Coarse Ware at Iblis is of the porous variety designated as Type 2 in her Rud-i Gushk survey and found at Tepe Yahya in periods VIB–VB. It is quite different from the dense Rud-i Gushk Type 1 which is found in Yahya VII. Common Iblis I forms are large storage vessels with undercut lower bodies and concave bases, pear-shaped vessels, and simple bowls (Caldwell and Sarraf 1967:pl. 2:lower left, figs. 6–7, pl. 7:lower left; Chase, Caldwell, and Fehervari 1967:150; Evett 1967:fig. 1:1–3). At Yahya, large storage jars with undercut lower bodies and flat bases are characteristic of Yahya VI–VA.2.

The best ceramic parallels to the west are with the Shamsabad period in Fars. The fabric of Lalehzar Coarse Ware is similar to Shamsabad Ware (Chase, Caldwell, and Fehervari 1967:150), and coarse ware vessels with concave bases are relatively common in the Shamsabad assemblage (Egami and Masuda 1962:5, fig. 18; Egami, Masuda, and Gotoh 1977:pls. III:31–33, IV:10, 14; Sumner 1972a:pl. V:E–F). The use of applied elements on Shamsabad Coarse Ware sherds (Jari AII, Egami, Masuda, and Gotoh 1977:2, pl. IV:1–2) is paralleled by large storage vessels on Iblis I house floors (Evett 1967:203). A small number of Lalehzar sherds from Iblis I are painted with broad red bands and simple designs (Caldwell and Sarraf 1967:fig. 6:3; Chase, Caldwell, and Fehervari 1967:fig. 3, bottom); painted Coarse Ware sherds occur at the beginning of the Early Bakun phase in Fars (Egami and Masuda 1962:fig. 19:36) as well as in Yahya VIB.2–VC (Beale 1978:27–28, 34, fig. 3:lower right). Farther to the west, very good parallel storage vessels with concave bases occur in Jowi 14, or the end of the Jaffarabad period (Dollfus 1983:fig. 19:10), where they represent a development of forms found at the beginning of this period (Dollfus 1971:fig. 30:8, 1975a:figs. 14–15, 1983:fig. 11:13–15, 17–18).

Parallels for Iblis I small finds also occur in Shamsabad and Early Bakun. Conical concave-based spindle whorls similar to those in Iblis I occur in Bakun deposits at Jari AI and Bakun BII (Caldwell and Sarraf 1967:fig. 10:3; Evett 1967:fig. 8:8; Egami and Masuda 1962:fig. 21:20, pl. IV:3; Egami, Masuda, and Gotoh 1977:pl. VI:15). They are found in somewhat later contexts at Bendebal 16–20 or the middle of the Chogha Mish Phase (Dollfus 1983:fig. 93:2–5). A fragment from the floor of House F appears to be the incised base of a seated figurine (Evett 1967:fig. 8:2), similar to one from Jari A (Egami, Masuda, and Gotoh 1977:pl. VI:2).

The buildings of Iblis I are made of mud-bricks, with four to eight thumb impressions arranged in two rows (Caldwell and Sarraf 1967:pl. 7, lower). Similar bricks appear within Kirman in Yahya VIIC and go out of use during Yahya VB (Beale 1978:494). Thumb-impressed bricks with four depressions occur in Sialk II, and in slightly variant form in the Cheshmeh Ali period at Zagheh (Ghirshman 1938:pl. LVIII; Malek Shahmirzadi 1977b:fig. 11, 1979b:184). In Mesopotamia they occur in the Transitional levels at Chogha Mami (Oates 1973:175) and in Temple XV at Eridu (Lloyd and Safar 1948:121). The Iblis I long bricks are similar in size to finger-grooved bricks found in the Archaic Susiana period at Chogha Mish (Delougaz 1976:35) and in the Cheshmeh Ali period at Zagheh (Malek Shahmirzadi 1979b:184, fig. 3). Long bricks occur in the Jaffarabad period at Bendebal 28 (Dollfus 1983:137–38), Jowi 16 (Dollfus 1983:22), and in the Susa A Phase at Jaffarabad (Dollfus 1971:28).

Thus ceramic parallels link Iblis I with Yahya VI and early V, a range that is supported by the architectural evidence; however, the presence of strong ties between Early Iblis II and Yahya VC–B (see below) suggests that Iblis I is contemporary Yahya VI. Farther west, Iblis I can be placed contemporary with Shamsabad and Early Bakun in Fars.

C. *The Iblis II period* is defined by the appearance of large quantities of fine ware (Chase, Caldwell, and Fehervari 1967:154; Evett 1967:tables 2, 8, 15). It can be divided into two stratigraphic phases, characterized by different frequencies of the major decorated wares. Although comparisons with other regions are not always clear-cut due to the overlap in ceramic types between phases, the chronological pattern that emerges is consistent and useful.

1. *The Early Iblis II (Bard Sir) phase* is represented by "fill" inside the houses of Areas D, F, and G (Evett 1967:table 8), and by the lowest levels of a trash dump in Area E, ca. 60 m away from the mound (Chase, Caldwell, and Fehervari 1967:155–58; Caldwell 1967b:fig. 1). Lalehzar Coarse Ware continues, but Bard Sir and Iblis Wares also occur in some quantity (Chase, Caldwell, and Fehervari 1967: tables IV–VIII; Evett 1967:tables 2–4).

Bard Sir Painted Ware is decorated with black, maroon, or fugitive red painted designs which are arranged in bands on bowls (Chase, Caldwell, and Fehervari 1967:151, fig. 4:middle and bottom, 5–10; Evett 1967:203, figs. 3–4; Sarraf 1981:fig. 5:73, pl. 7:2–3). Prickett (1986) compares this pottery with her Rud-i Gushk survey Types 4 and 5 or Yahya Black-on-Buff Ware, as does Beale (1978:126; see also Lamberg-Karlovsky 1970a:figs. 39–40, 42–43); this places Early Iblis II contemporary with Yahya VC–B (see Yahya sequence). The only illustrated example of Iblis Painted Ware from Early II, a small sinuous-sided beaker with a band of nested chevrons running around the rim (Evett 1967:fig. 5), is exactly paralleled in Yahya VB (Lamberg-Karlovsky 1970a:fig. 29b–c).

To the west, a group of unique and complex design elements links the Bard Sir Painted Ware of Early Iblis II to Middle-Late Bakun in Fars: a "tick" or insect motif (Chase, Caldwell, and Fehervari 1967:fig. 6:center right, 10:lower; Egami and Sono 1962:fig. 20:12, Gap I, 12:6, Gap II; Egami and Masuda 1962:fig. 15:2, Chicago Bakun BII; Miroschedji 1973:fig. 4:19, Fasa); flying birds with "comb" wings (Chase, Caldwell, and Fehervari 1967:fig. 5:upper right, fig. 6:upper left; Langsdorff and McCown 1942:pl. 76:11, 14, Bakun AIII; Miroschedji 1973:fig. 4:6, Fasa); triangular-bodied figures lined up end to end (Chase, Caldwell, and Fehervari 1967:fig. 6:upper right; compare with Langsdorff and McCown 1942:pl. 47:11, Bakun AII; Miroschedji 1972:fig. 4:6, Fasa); a zigzag pattern alternating with vertical combs (Chase, Caldwell, and Fehervari 1967:fig. 6:lower left, fig. 11:center right; Egami and Sono 1962:fig. 23:2–4, Gap I and II); a Maltese cross with combs on four sides (Chase, Caldwell, and Fehervari 1967:fig. 7, bottom; Egami and Sono 1962:fig. 31:1, Gap I; variants in Bakun AI, III and IV: Langsdorff and McCown 1942:pls. 44:10, 45:5, 48:15; Gap II: Egami and Sono 1962:fig. 30:2); a lozenge or square (Chase, Caldwell, and Fehervari 1967: fig. 4, center; Langsdorff and McCown 1942:pls. 61:2, 49:4, Bakun AI; Egami and Masuda 1962:fig. 17:4); bands of solid black triangles bordered on each side by a line (Chase, Caldwell, and Fehervari 1967:fig. 6, center right; Langsdorff and McCown 1942:pls. 32:8, 35:6, Bakun AIII); and a multiple-lined swastika (Chase, Caldwell, and Fehervari 1967:fig. 5, above center; Langsdorff and McCown 1942:pls. 78:32, 80:21). Designs composed of zigzags with solid apices and combs (Chase, Caldwell, and Fehervari 1967:fig. 6:lower left, 11:top and center; Evett 1967:fig. 3, top right) occur in a variant form in Chicago Bakun BII (Egami and Masuda 1962:fig. 15:7), Tal-i Gap Ia (Egami and Sono 1962: fig. 23:3–4), and Bakun AIII (Langsdorff and McCown 1942:pl. 57:6–7). An incised artifact in a crosslike form with crosshatched incision on one face and with a lenticular cross section is generally comparable to lenticular and button seals with notches cut into the sides found in Middle and Late Bakun contexts (Chase, Caldwell, and Fehervari 1967:fig. 36:11; Egami and Masuda 1962:fig. 20:2,pl. IV:1; Langsdorff and McCown 1942:pl. 8:6–7).

To summarize, the numerous and specific parallels in painted design suggest that the Early Iblis II Bard Sir Painted Ware is an eastern variant of the Middle to Late Bakun phase ceramic tradition of Fars. They also provide a strong link to Yahya VB–C. If we accept these correlations, the chronological distribution of Bard Sir Red-Slipped Ware, common in Iblis II, is particularly interesting (see Chase, Caldwell, and Fehervari 1967:152, 154, fig. 12, pl. 6, tables V–VIII; Evett 1967:203, tables 2–4). Prickett equates Bard Sir Red-Slipped with the Soghun Wares characteristic of Yahya VI and VC–B (1986; see "Yahya"). Parallels in vessel form link Bard Sir Red-Slipped Ware to the Lapui period in Fars: holemouth jars (Chase, Caldwell, and Fehervari 1967:fig. 12; Sumner 1972a:pl. XV:A–C) and flared-rim bowls with flat bases (Chase, Caldwell, and Fehervari 1967: pls. 4:7–8, 6; Sumner 1972a:pl. XIV:A, G, J–L, N). The Lapui period succeeds Bakun and is therefore later than Iblis II. Thus the technological tradition represented by this group of red-slipped wares seems to have begun in the east and gradually spread to the west.

2. *The Late Iblis II phase* is defined by level 1 of Area E:sections A–B, and by the deposit from 260 cm to 200 cm in Area A:section C (Chase, Caldwell, and Fehervari 1967:157, 170, tables V–IX. Note that most of the illustrated pottery comes from Area C, a unit assigned by the excavators to Iblis II but never analyzed; Chase, Caldwell, and Fehervari 1967:174). While Bard Sir Painted is still present, Iblis Painted Ware is now the most common fine ware (Chase, Caldwell, and Fehervari 1967:154, figs. 13–17). Parallels between Iblis Painted ceramic industries in Fars are less striking than those for Bard Sir Painted, but they cluster in the Late Bakun phase. They include painted zigzags on sinuous-sided beakers found in Gap IIa–b (Chase, Caldwell, and Fehervari 1967:fig. 13; Egami and Sono 1962:fig. 82:5, 8, table 1:designs Ic3) and painted potters marks on the base of vessels in Bakun AIII–IV (Chase, Caldwell, and Fehervari 1967:fig. 15, bottom; Langsdorff and McCown 1942:pl. 80:25–26).

D. *The Iblis III (Dashkar) period* is defined by level 3 of the 1964 test block, supplemented by material from the 150–200 cm level in Area A:section C (Chase, Caldwell, and Fehervari 1967:177, table IX). This sample, which consists almost entirely of ceramics, is further enlarged by material found in the Gypsum Burning Furnace (Caldwell 1967b:fig. 3; Chase, Caldwell, and Fehervari 1967:112, 117, pls. 7, 9, figs. 18–20, tables IX, XII; see also Sarraf 1981:pl. 8:126–31, figs. 44:79, 46:117–18). During Iblis III, Lalehzar Coarse Ware and associated painted wares have become rare, replaced by three types of red-to-buff pottery: Dashkar Plain, Dashkar Brushed, and Dashkar Painted Wares (Chase, Caldwell, and Fehervari 1967:177, pl. 7,figs. 18–20). Prickett (pers. comm. 1984) equates Dashkar Plain and Painted Wares with Rud-i Gushk survey types 7, 7A, 8, and 8A, and Dashkar Brushed with her type 6. The same pottery is found in Yahya VA (q.v.). The marked break noted at Iblis between periods II and III (Caldwell 1967b:36) appears to be a local phenomenon, since the Rud-i Gushk survey produced transitional pottery (Prickett 1986). Fabric and simple vessel forms suggest a link between Dashkar Wares and Lapui Wares from Fars; common forms include jars with short everted rims (Chase, Caldwell, and Fehervari 1967:fig. 18:top, 19:top; Langsdorff and McCown 1942:pl. 20:11, 15; Sumner 1972a:pls. XII:K, M, XIII:K–Q) and hemispherical bowls (Chase, Caldwell, and Fehervari 1967:pl. 7:2; Langsdorff and McCown 1942:pl. 20:10, 14, 19; Sumner 1972a:pl. XIV:D, M).

E. *The Iblis IV (Aliabad) period* is defined by levels 4–5 in the 1964 cut, supplemented by material stratified above Dashkar Ware sherds at the site of Aliabad (Chase, Fehervari,Caldwell 1967:75–79). The only other area where this ceramic assemblage has been found is in the Soghun Valley, where it occurs only in surface contexts (see below). Since Iblis IV represents the only stratified occurrence of Aliabad pottery, it is described in some detail here.

The ceramic "complex" includes Aliabad Plain, Painted, Bichrome, Brushed, and Ridged Wares (Chase, Fehervari, and Caldwell 1967:79; Chase, Caldwell, and Fehervari 1967:pl. 10, figs. 23–27). With the exception of Ridged Ware, the Aliabad pottery is handmade; fired from pink to red, it is frequently buff-slipped (Caldwell 1967b:37; Chase, Caldwell, and Fehervari 1967:79, 184, fig. 21:right, 27; Sarraf 1981:figs. 1:2, 26:291–92, 41:33–45, 45:98, 100–108, 46:109–16, 119–26, 47:127–36, 48–50, 51:183–87, 59:511–16, pl. 12:1, 16). Large and "carelessly drawn" geometric designs are characteristic of Aliabad Painted Ware (Chase, Caldwell, and Fehervari 1967:figs. 21–26; Chase, Fehervari, and Caldwell 1967:79, pls. 1–2; Sarraf 1981:figs. 1:2–6, 11–15, 3:41–47, 4:50–54, 6:75–81, 9:108, 116, 10:118–26, 11, 12:140–41, 144–45, 14–15, 16:181–85, 17–19, 20:215–18, 222–24, 23:265–67, 24, 26–30, 31:345–48, 32–34, pls. 9–23). Aliabad Bichrome Ware has black and red, brown and green, or black and green paint on a buff slip (Caldwell 1967b:37; Chase, Caldwell, and Fehervari 1967:79, pls. 1–2; Chase, Caldwell, and Fehervari 1967:pl. 10, figs. 21–23, 25–28). Vessels classified as Aliabad Ridged Ware have string-cut bases (Chase, Caldwell, and Fehervari 1967:fig. 24; Chase, Fehervari, Caldwell 1967:pl. 7; Sarraf 1981:fig. 48:149–50). Beveled-rim bowls were sometimes associated with Aliabad wares

(Caldwell and Malek Shahmirzadi 1966:16, fig. 4; Chase, Caldwell, and Fehervari 1967:tables XIII, XVI).

Sites with Aliabad wares have been identified in the Soghun Valley, and dated to a hiatus in the Yahya sequence between periods VA and IVC. The following ceramic parallels suggest that the Aliabad period is contemporary with the Early(?) Banesh period in Fars: rare beveled-rim bowls, trays (Chase, Caldwell, and Fehervari 1967:fig. 24, bottom; Alden 1979:fig. 33:28), and squat, sinuous-sided vessels with strongly everted rims (Chase, Caldwell, and Fehervari 1967:fig. 22, center; Nicholas 1980:fig. 170).

F. *The Iblis V (Mashiz) period* is defined by geometric painted sherds found in stratigraphically mixed contexts on the mound; in addition, surface sherds extend for several hectares around Tal-i Iblis (Chase, Caldwell, and Fehervari 1967:188). Mashiz Wares are grit-tempered and extremely hard, described by the excavators as "stone ware" (Chase, Fehervari, and Caldwell 1967:84–85, pls. 4:2–3, 8:2–3). The only similar pottery reported is from unstratified contexts at Shahdad; so at present this material appears to be a local development within Kirman. If the Mashiz ceramic complex has been placed correctly, and we emphasize that its position relative to the Najaferabad complex (see below) has not been established stratigraphically, this "period" must have been of brief duration, interpolated between two periods characterized by ceramics related to Early Banesh.

G. *The Iblis VI (Najafarabad) period* is here defined as the upper levels of Test II, 0 to −60 cm (Chase, Caldwell, and Fehervari 1967:188–89). The pottery assigned to the Najafarabad complex (Chase, Caldwell, and Fehervari 1967:figs. 39–40; Sarraf 1981:fig. 60:525–28) is generally paralleled in Sialk IV (Caldwell 1967b:38; Ghirshman 1938:pls. LXXXVIII, XC:S.537). In addition to beveled-rim bowls, there are two parallels in vessel form between the Najafarabad period and the Banesh period in Fars: trough spouts (Chase, Caldwell, and Fehervari 1967:fig. 40:1–2; Alden 1979:fig. 47, top) and sinuous-sided bowls with a flattened, everted rim (Chase, Caldwell, and Fehervari 1967:fig. 39, top; Alden 1979:fig. 50:7). This bowl form is also found in Susa Acropole I:17 (Le Brun 1971:fig. 46:16–17) and in Godin VI/V (V. Badler, pers. comm.).

The Central Desert: Shahdad

Ancient Khabis or Shahdad lies east of Kirman on the edge of the Dasht-i Lut. Excavations from 1969 to 1977 by the Archaeological Service of Iran under the direction of Ali Hakemi revealed an extensive necropolis (Hakemi 1970, 1972, 1973a, 1973b, 1976a, 1976b; Amiet 1973a, 1974, 1976). In 1977 a systematic surface survey of the area around the necropolis was carried out by S. Salvatori and M. Vidale (Salvatori 1978a, 1978b; Salvatori and Vidale 1982). The "points" sampled by the survey provide evidence that Shahdad is a horizontal rather than a vertical site, resulting from a movement of the settlement from east to west following the retreat of water sources toward the adjacent mountain (Meder 1979). Complete publication of the survey data should make it possible to document the cultural sequence at the site; meanwhile, it seems wiser to simply present a brief summary of the results without attempting to define descrete chronological units.

A. *The Shahdad Survey* sherds can be dated by comparisons with the Iblis and Yahya sequences. They indicate an occupation contemporary with Yahya VB–A and Iblis I–II at Shahdad Point 2; Iblis IV at Point 4; Yahya VA–IVC at Point 5; and Yahya IVA at Point 6 (Salvatori and Vidale 1982).

B. *The Shahdad Cemetery* was divided into four areas labeled A through D. Area A was the main necropolis, and most of the published artifacts come from this zone; two zones within it, areas AT1 and AT2, reflect distinct periods of use (Hakemi 1972, 1973b, 1976a).

1. *Area AT1* contained graves with Black-Painted Red, or Buff pottery decorated with motifs such as loops, lines, stylized birds, and trees. On overfired greenish pottery, motifs include suns and date palm leaves (Hakemi 1976a:fig. 2). Hakemi (1976a:136) compares this pottery to that from Bampur, Yahya, Khurab, Damin, and Deh-Qazi and suggests a general date at the beginning of the third millennium.

2. *Area AT2* is much larger than AT1. Although no bones remained, the graves were very rich, containing artifacts that have wide-ranging parallels. Unfortunately, grave groups have not been published; so speculation on dating has centered around individual objects.

The wheel-made pottery includes plain and painted buff wares, the latter decorated with animal and floral motifs (Hakemi 1976a:fig. 4, 1972:pls. I–VII). More common, however, is Black-Painted or Plain Red Ware (e.g., Amiet 1973a:23, top left; Hakemi 1972:pls. IV:C, VII:B; 1982:4, top left; Salvatori and Vidale 1982:fig. 12). Over eleven hundred Red Ware vessels bore pictographs that were incised or stamped with compartmented bronze seals (Hakemi 1976a:137; Amiet 1973a:24, 1974:figs. 2–4; Hakemi 1972:pls. XXII:B, XXIII:B, XXIV:B–C; 1973a:pl. X). Lamberg-Karlovsky states that the painted wares of Yahya IVB and the incised and stamped pottery of Yahya IVA are virtually identical to material at Shahdad (1973:41, n. 3, 1977:41–42). Of the 348 signs recorded at Shahdad (Hakemi 1973a, 1973b), 16 were also found at Yahya, primarily in IVB and IVA (Potts 1981:figs. 3, 5, tables 3, 5; Lamberg-Karlovsky and Tosi 1973:fig. 49; for earlier marks in Susiana see Dollfus and Encrevé 1982).

Bronze compartmented seals provide an excellent horizon marker (Amiet 1974:fig. 1; Hakemi 1972:pl. XXI:B, 1976a:138a, fig. 8; Salvatori and Vidale 1982: fig. 6:5–6). They also occur at Susa (Amiet 1974:97ff.); in Yahya IVB (Lamberg-Karlovsky 1971a:91, fig. 2c; see also Amiet 1974:fig. 3); in Bampur IV (de Cardi 1970: fig. 47:15, 51); in Shahr-i Sokhta II–III (Lamberg-Karlovsky and Tosi 1973:figs. 41–49; Tosi 1968:figs. 99–100, 1969a:fig. 276); in Mundigak IV–V (Casal 1961:pl. XLV); in Hissar III (Schmidt 1937:figs. 118:H2697 and 2698); and in the Namazga V period in Turkmenistan where such seals apparently originated (Pittman 1984:53–56).

Additional links to Hissar III are minicolumns of Hissar IIIC type (Deshayes 1977:101, n. 10; Hakemi, pers. comm.; Schmidt 1937:pl. LXI); flat copper dishes decorated with repoussé figures in the base (Amiet 1973a:27, top, 1976:fig. 9; Hakemi 1972:no. 253 opp. p. 17, 1976a:figs. 5–6; Schmidt 1937:fig. 112:H2252); and the use of incised concentric circles to decorate steatite/chlorite vessels (Hakemi 1972:pl. IX:C–D; Schmidt 1937:pl. LX:H3494, 3495, 3498, figs. 128, 130). Alabaster/"marble" vessels that are carinated or cylindrical with everted rims have good parallels in Hissar IIIC (Hakemi 1972:pls. XII–XIII; Schmidt 1937:fig. 125, pls. LIX:H3615, 3523), as do rectangular white stone beads with notched sides (Hakemi 1976a:fig. 12; Schmidt 1937:pl. LXIX:H2856).

Other steatite vessels include plain bowls, compartmented boxes, cosmetic jars, models of buildings, and bowls with incised floral and animal representations, including serpents, bulls, and felids (Amiet 1973a: 24:lower, 1976:fig. 8; Hakemi 1969:fig. 9, 1972:pls. IX–XI, XIV–XV, no. 166 opposite p. 16, 1976a:fig. 10). Both the *ancienne* and the *récente* styles delineated by Miroschedji (1973) are found in the excavated sample (see "Western Susiana"). Although some of the decorated Shahdad vessels can be assigned to the Intercultural Style characteristic of Yahya IVB, most are closer to the chlorite found in Yahya IVA and later (Kohl 1974:75, 338–40; Lamberg-Karlovsky 1973:41, n. 3).

Important cylinder seals are an alabaster seal with seated vegetation goddess (Hakemi 1972:pl. XXVI, 1973a:pl. XC, 1976a:fig. 11; Amiet 1973a:25:upper, 1974:fig. 9); a less well preserved alabaster/calcite seal with vegetation deities (Amiet 1973a:25:middle, 1974:fig. 10; Hakemi 1976a:140); and a silver seal with two women flanking a tree (Hakemi 1972:no. 325, 1976a:140, not illustrated). Amiet compares the iconography of the vegetation goddess seals with some from Yahya IVB and IVA as well as from late Early Dynastic Susa and Early Dynastic and Akkadian Mesopotamia (Amiet 1973a:23–24); but as is so often the case with seals, these examples may well be older than the contexts in which they are found. The only historical date comes from an Elamite inscription on a small red vase that may belong to the time of Puzar-Inshushuinak around 2330 B.C. (Amiet 1973a:23).

Amiet (1973a:22–23) believes that within Area AT2 there is an early series of graves with carinated vessels of alabaster and copper (see above and Hakemi 1969:fig. 13:1–7, 1972:pls. XVI–XIX, XX:B, XXI:A) which he equates with the terminal Early Dynastic period at Susa (IVA), and a second or more recent series containing the red pottery with stamped and incised signs. The range of parallels documented certainly suggests that the graves from Area A span a good deal of the third millennium B.C.; however, much of the published material shows strong ties with Hissar III and Yahya IVB–A, or the second half of the third millennium.

Soghun Valley: The Yahya Sequence

The Soghun Valley is located approximately 200 km south of Kirman. Routes lead 150 km farther south to the Persian Gulf, 350 km east to Bampur, and 180 km north to Tal-i Iblis and Kirman. Tepe Yahya, the largest mound in the area, has been the major focus of research. Excavations carried out from 1967 to 1975 by the Harvard University Yahya Project were under the direction of C. C. Lamberg-Karlovsky (1968, 1969, 1970a, 1970b, 1971a, 1971b, 1972a, 1972b, 1973, 1974, 1976a, 1976b, 1977; Lamberg-Karlovsky and Tosi 1973; dissertations on file at Harvard University: Beale 1978; Kohl 1974; Potts 1980). Surveys were carried out in the Soghun Valley, and the adjacent Shah Maran-Dolatabad Basin which includes the upper Rud-i Gushk drainage 25 km west of Yahya (Lamberg-Karlovsky 1968, 1974, 1976a; Beale 1976; Vidali, Vidali, and Lamberg-Karlovsky 1976; Prickett 1976, 1979).

At Yahya, excavation was confined to two large step trenches down the northern and southern slopes of the mound. The South Trench, which established the primary sequence, was composed of 10 × 10 m areas labeled from A at the top through E (Lamberg-Karlovsky 1976a:fig. 1). The strata excavated in the North Trench, in areas XA through XE, were correlated with the main South Trench by means of ceramics (Beale 1976:9, 12, map 3; Lamberg-Karlovsky 1976a:fig. 1). The sequence was ultimately divided into seven periods, designated Yahya VII–I from the bottom up (Beale 1978; Potts 1980; Lamberg-Karlovsky 1977). This system replaces and alters the designations published between 1969 and 1976. An earlier phase of Yahya VII was found in a stratigraphic test at Tepe Gaz Tavila in the Upper Rud-i Gushk drainage (Prickett 1979, 1986).

A. *The Muradabad (Early Yahya VII?) period* is defined by five phases of mud-brick architecture at Tepe

Gaz Tavila, R37 in the Rud-i Gushk survey (Prickett 1979, 1986). The occupation is characterized by Vegetal-Tempered Dense Coarse Ware, or Rud-i Gushk survey Type 1. Comparable pottery at Yahya, called Early Coarse Ware, was used to separate period VII—which it characterizes—from period VI (Beale 1978:8). Radiocarbon dates (table 2) seem to indicate that the Gaz Tavila material is somewhat earlier than the period VII material at Yahya.

B. *The Yahya VII (Baghin) period* is defined in the South Trench by areas C, D, E, and CDE. It is divided into subperiods VIID, VIIC, VIIB6–1, and VIIA on the basis of building remains and surfaces, with a total depth of deposit of about 5.5–6 m (Beale 1978:138ff., 289, plans 1–10, 20, sections 2, 4). The predominant pottery is Early Chaff-Tempered Coarse Ware which is handmade and often burnished (Beale 1978:fig. 2). Prickett (1986) notes that this pottery has a dense fabric and bears little resemblance to the porous variety characteristic of Yahya VIB–VB and Iblis I–II.

Yahya VII Coarse Ware does resemble the plain chaff-tempered pottery characteristic of the Shamsabad period in Fars (Beale 1978:125, 127), and also associated with Jari Painted Ware in the preceding period (W. Sumner, pers. comm. 1985; see "Southwestern Zagros"). A group of artifact parallels suggest a correlation of Yahya VII and the Mushki period in Fars: two-holed bone ornaments (Beale 1978:356–57, fig. 32; Fukai, Horiuchi, and Matsutani 1973:pl. LV:39–40, 42), concave-sided labrets/ear plugs (Beale 1978:358, fig. 33; Fukai, Horiuchi, and Matsutani 1973:pl. LV:33), clay cones (Beale 1978:40; Fukai, Horiuchi, and Matsutani 1973:pl. LV:11–14), grooved stones (Beale 1978:375, fig. 38; Fukai, Horiuchi, and Matsutani 1973:pl. LV:65–66), stone bangles (Beale 1978:361; Fukai, Horiuchi, and Matsutani 1973:pl. LV:33), and bone sickle handles (Beale 1978:385; Fukai, Horiuchi, and Matsutani 1973:pl. VI:1). There is, however, great continuity both at Yahya (see below) and in the Fars sequence, so clay cones, grooved stones, and labrets/ear plugs also occur in Jari contexts (see "Southwestern Zagros"). Given the probable correlation of Yahya VI with Shamsabad to Early Bakun and the parallels listed above, Yahya VII can only be placed contemporary with some part of the Mushki to Shamsabad range in Fars.

C. *The Yahya VI (Soghun) period* is defined by ca. 2.2 m of deposits in the South Trench (Areas B, BW, C, CW, CDE, and D; Beale 1978:section 2). Beale divides Yahya VI into building stages VIA and B, with VIB subdivided into VIB1 and VIB2 (1978:217, 228, 237, plans 13–15). Since most of the small object types are very long-lived, continuing from periods VII to V, it is the ceramics and architecture of these periods that change and provide evidence for relative chronology. The major ceramic group in Yahya VI, Late Chaff-Tempered Coarse Ware, is lighter and less dense than the Early Coarse Ware of VII, and is rarely burnished. A very small number of fine ware sherds with varying surface treatments are designated as Soghun Wares (Beale 1978:43–44, figs. 5, 7–8, 10).

Prickett compares all of the Lalehzar Coarse Ware from Iblis I–II to the porous Late Chaff-Tempered Coarse Ware of Yahya VIB to VB. Yahya VI straight-sided carinated vessels with undercut lower body (Beale 1978:25–26, fig. 3, top center) are also typical of Iblis I Lalehzar Coarse Ware (Caldwell and Sarraf 1967:pl. 2 lower left, fig. 7; Evett 1967:fig. 1:1). From Yahya VIB2–VC comes rare Coarse Ware rims or body sherds painted in red with broad meandering patterns on the exterior (Beale 1978:27–28, 34, fig. 3); they are comparable to Coarse Ware with red geometric designs found in Iblis I (Caldwell and Sarraf 1967:figs. 3, 6) and in Early Bakun in Fars (Egami and Masuda 1962:fig. 19:36). Rare pedestal bases from Yahya VI are also paralleled in Early Bakun (Egami and Masuda 1962:fig. 19:36). In Yahya VIB the first stamp seal occurs, made of lightly fired clay. With crosshatched incised lines on a rectangular face and a tabular stem, it recalls a seal from the Early Bakun phase at Jari AI (Beale 1978:366; Egami, Masuda, and Gotoh 1977:pl. VI:4).

Prickett (1986) compares the fabric of Soghun Wares to the Bard Sir Plain and Red-Slipped Wares found at Iblis. Holemouth jars, characteristic of Soghun Mottled Purple, occur in rare Bard Sir Red-Slipped Ware in Iblis I (Beale 1978:41; Chase, Caldwell, and Fehevari 1967:fig. 12; note that the jar illustrated is from Iblis II). Beale (1978:123) has suggested the possibility that some Bard Sir Painted at Iblis, occasionally decorated with a faded/fugitive red (Chase, Caldwell, and Fehervari 1967:152), could be Soghun Red Painted; Bard Sir Painted is rare in Iblis I, common in Early Iblis II, and declines in Late Iblis II. The only design parallel for Red-Painted Soghun Ware is a single Bard Sir Painted sherd with triangles filled with diagonal lines at the rim from a Late Iblis II deposit, and therefore later than the rest of the parallels (Chase, Caldwell, and Fehervari 1967:fig. 4, upper right).

Thumb-impressed bricks, which began at Yahya in VIIB, are now found in walls supported by buttresses placed at corners and other strategic points; carefully plastered semicircular hearths were placed in room corners (Beale 1978:218, plans 13, 16). These attributes, which continue through period VC at Yahya, are paralleled in Iblis I buildings (Caldwell and Sarraf 1967:306, fig. 18, pl. 7 bottom; Evett 1967:figs. 9–18).

In general, ceramic correlations would appear to place Yahya VI contemporary with Iblis I and perhaps Early II. Ceramic ties to Fars are limited to the Early Bakun phase. Specialized architectural features support a correlation of

Yahya VI with Iblis I, the latter independently linked to the Shamsabad to Early Bakun phases (see "Iblis"). Given the strong ties between Iblis II and Middle to Late Bakun, we suggest a correlation of Yahya VI with Iblis I and Early Bakun.

D. *The Yahya V (Yahya) period* is divided into three major phases, VC, VB, and VA2–1. These deposits are defined in the South Trench in Areas B, BW, C, CW, CDE, and D (Beale 1976:sec. 3, plans 16–17, 19).

1. *The Yahya VC phase* consists of perhaps two building levels totaling about 1.25 m in depth (Beale 1976:248–250, sec. 3, plan 16). The architecture of Yahya VC, which includes a large residential complex consisting of a "central core of small square rooms surrounded by several larger rectangular 'living' rooms" (Beale 1978:250, plan 16), is virtually identical in plan and construction to that of Iblis I. Black-on-Buff Ware, some of which has been established by mineralogical analysis as imported from the west (Kamilli and Lamberg-Karlovsky 1979), is rare as is Bichrome and Red-Painted Ware. The repertoire of painted designs includes "ticks" and reversing crosshatched triangles or torsos linked by arms, in a style that is quite different from that in Yahya VB–A (compare Beale 1978:fig. 14 with figs. 13, 16), but is characteristic of Iblis II Bard Sir Painted Ware and the Middle to Late Bakun phases (Beale 1978:123, 321–25; Lamberg-Karlovsky 1971a:88; see also "Southwestern Zagros"). Limited to Yahya VC is the occurrence of painted bands on the interior of bowls, similar to those found in Gap I or Early Bakun. A correlation of Yahya VC with the earliest part of Iblis II, and with the Early to Middle Bakun period seems indicated. Farther to the east, Dollfus considers the best parallels for the VI–VC Black-on-Buff ceramics to be with Bendebal 14–12 at the end of the Susiana sequence (pers. comm. to Martha Prickett), which would be compatible with a Middle Bakun correlation. Note that the presence of significant quantities of Lapui-related pottery in Yahya VC (Beale 1978:53–55, fig. 11) provides evidence that the ceramics characteristic of the period following Bakun in Fars originated in eastern Iran (see "Southwestern Zagros").

2. *The Yahya VB phase* is defined by a single building level about 1.10 m deep (Beale 1978:268, plan 17, sec. 3). The highest percentage of Lapui Ware occurs in this phase. Black-on-Buff Ware is now common and is manufactured of local clay. Late Coarse Ware continues as does rare Red-Painted Coarse Ware (Beale 1978:figs. 13, 16–17, 28).

The dating of this phase is difficult. Beale (1978:126) compares the Yahya VB Black-on-Buff Ware, also designated as Rud-i Gushk survey Types 4 and 5, with Bard Sir Painted Ware at Tal-i Iblis. This places Yahya VB contemporary with our Early Iblis II phase, the period in which Bard Sir Ware is most common. On independent evidence, Early and Late Iblis II are contemporary with Middle and Late Bakun (see "Iblis"). A correlation with Middle Bakun for Yahya VB seems indicated.

3. *The Yahya VA phase* is divided into two subphases, VA1–VA2, defined in Areas B, BW, C, CW, and CDE in the South Trench (Beale 1978:279, 282, plan 19). The total depth in square C is about 2.35 m (Beale 1978:sec. 3). During Yahya VA2, Plain Coarse Ware replaces Late Chaff-Tempered Coarse Ware as the dominant ceramic group (Beale 1978:fig. 25), while in VA1, Black-on-Red Ware or Plain Coarse Ware with paint increases to 40 percent of the ceramic sample (Beale 1978:21, figs. 18–22, 26). Prickett (1986) equates the pottery of Yahya VA, her Rud-i Gushk survey Types 7, 7A, 8, and 8A, with the Dashkar wares of Iblis III. A deep-cut stamp seal–like artifact made of lapis lazuli, which has a subrectangular incised upper surface and is perforated in the center at a right angle to the decorated surface (Beale 1978:350, fig. 31), is closely comparable in design and method of cutting to a Late Bakun stamp seal from Fars (Langsdorff and McCown 1942:pl. 82:2).

Thus the few parallels available suggest a linkage between Yahya VA and Late Iblis II and Iblis III, as well as with the Late Bakun phase and possibly Lapui period in Fars. This is supported by an independent set of parallels that correlate Iblis II–III with Late Bakun and Lapui (see "Iblis").

E. *The Aliabad Period (Yahya VA–IVC hiatus)* is represented at Yahya by "erosion deposits" in the South Trench (Beale 1978: secs. 1–3) and is defined by surface remains from sites in the Dolatabad and Soghun Valleys, including Tepe Yahya (Prickett 1979:54, 1986). Aliabad ceramics are characteristic of Iblis IV (q.v.) and are said to occur at Shahdad (Potts 1980:430).

F. *The Yahya IVC (Proto-Elamite) period* is defined by a building in the South Trench that may have been laid out to a standard unit of measure close to that used in the Late Uruk period at Habuba Kabira in Syria (Beale and Carter 1983; Potts 1980:8–45, figs. 1–2). This period is securely tied by artifact parallels to sites in the west (Lamberg-Karlovsky and Tosi 1973, with refs.). Beveled-rim bowls, trays, and numerous conical cups may be compared to pottery from Middle Banesh Malyan (Potts 1980:426; Nicholas 1980; see "Southwestern Zagros"). Ceramic parallels also occur between Yahya IVC and Ville Royale I:18–17 or Susa IIIB (Potts 1980:429, n. 2 with refs.; see also Carter 1980). Kohl (1974), using chlorite artifacts, also ties Yahya IVC to the Proto-Elamite/"Jemdet Nasr" horizon (Potts 1980:570). Paleographic evidence links the tablets from Yahya IVC with those from Susa Acropole I:16 or Susa IIIA, as well as with Malyan (Potts 1980:381–82, 425–26, fig. 67; Lamberg-Karlovsky 1976a:73, fig. 3, pl. 7; Le Brun and

Vallat 1978:39–40; Vallat 1971:243). Cylinder seals and sealings from the IVC building have clear-cut affinities to Susa Proto-Elamite glyptic of Acropole I:16–14b (Amiet 1972:34, 71; Potts 1980:437) and with Sin Temple I–V at Khafaje (Amiet 1972:34ff.; Potts 1980:365–66, 369–73, figs. 61–64). Carter (1980:19, fig. 17:3–5, 7 with refs.) presents specific comparisons of sealings from Yahya IVC with Middle Banesh and Ville Royale I:18–17 to the west, and Shahr-i Sokhta I to the east. Black-on-Red-on-Orange Ware provides close parallels between Yahya IVC and Bampur II–III in Baluchistan (Potts 1980:519 with refs.).

Thus evidence from a variety of artifact types suggests that the Yahya IVC occupation was contemporary with Susa IIIA–B, the Middle and Late Banesh phases in Fars, and with the Jemdet-Nasr to Early Dynastic I period in Mesopotamia (Potts 1980:427; see also Carter 1984: 127–28).

G. *The Yahya IVB period* is subdivided into six building phases delineated in the South Trench. In 1970 these levels were presented as two units: phase IVB2, the "Persian Gulf Room," containing Persian/Arabian Gulf pottery types, cylinder seals, and Gulf-type stamp seals; and phase IVB1 with little architecture and much chlorite evidence. Potts (1980) revises this sequence to include six subphases: IVB6; IVB5, formerly IVB2; and IVB4–1, formerly IVB1.

Some of the ceramic types have a long duration and pertain to the period as a whole rather than to individual subphases. Much of the pottery with black-painted designs on an orange surface can be linked with Bampur V–VI to the southeast; common motifs include palm fronds, meandering crosshatched parallel lines, and humped bulls (Lamberg-Karlovsky and Tosi 1973:fig. 126; de Cardi 1970:figs. 34–41). At Yahya these occur from IVC through IVA, but are most common in the IVB strata (Potts 1980:519). Burnished Gray Ware in forms that include a pedestal base is also found in Yahya IVB and Bampur IV–VI (Lamberg-Karlovsky and Tosi 1973:41, figs. 110, 129–30; de Cardi 1970:fig. 43). Lamberg-Karlovsky and Tosi (1973:39–40) point out that Black-on-Gray Ware is a useful horizon style linking southeastern Iran, Pakistan, and sites on the Arabian penninsula. It occurs at Yahya from IVC through IVB5, and is also found in Bampur IV–V, Shahr-i Sokhta I–III, and as "Faiz Mohammed Gray Ware" at sites in Pakistan including Damb Sadaat III–II, sites in the Zhob and Lorelai valleys, and Mundigak III–IV2 (Lamberg-Karlovsky and Tosi 1973:40, chart I with refs.; Potts 1980:516–17). Similar pottery occurs in the Umm an-Nar culture of Oman and Abu Dhabi (Potts 1980:516) and in Mehrgarh VII (Jarrige and Lechevallier 1979:519ff.). Comb-incised ware, which occurs in limited quantities, is found throughout IVB and perhaps in IVC (Potts 1980:520) and is found in Bampur V and VI (de Cardi 1970:figs. 41:473, 32:12), at Bahrain in pre-Barbar and City I deposits (Potts, this vol., chap. 4), and in Ur III deposits on the Acropole at Susa (Stève and Gasche 1971:pl. 66:9–10). Based on style, Amiet considers the Yahya IVB glyptic to be Akkadian in date (1976).

1. *The Yahya IVB6 phase* follows a major cultural break in the sequence (Potts 1980:499ff.). The IVC building stood abandoned for some time, was leveled, and was eventually sealed by a floor level representing a reoccupation. At a slightly higher level several wall stubs occur below the floors of the IVB5 "Persian Gulf Room" (Potts 1980:508). This deposit, from the end of IVC to the construction of the "Persian Gulf Room," is defined as IVB6 by Potts (1980:509); it can only be considered as mixed fill and should not be used to bolster arguments about the degree of continuity between IVC and IVB.

Two unique finds from this context deserve mention. A stamp seal has a high back boss of Early Gulf type. Unfortunately the seal is broken and cannot be further identified with any certainty (Potts 1980:527–28, fig. 66B). Amiet (1976:20) considers it Akkadian in date, in which case it is probably intrusive from a later level. A sherd of brown-buff ware with applied bosses is closely paralleled in Ville Royale I:18–17 and in Early Dynastic II–III contexts in Mesopotamia (Potts 1980:211; Carter 1980:fig. 14:13–14); it may, however, be derived from a lower stratum, as several sherds of this type occur in IVC (Potts 1980:211: Lamberg-Karlovsky and Tosi 1973:fig. 89:4).

2. *The Yahya IVB5 phase* is defined by the "Persian Gulf Room" (Potts 1980:62–72, fig. 10). Ceramics provide good evidence of contact with sites to the east (see above), and a few parallels to the west. Forms continuing from IVC and IVB6 are beveled-rim bowls and a vessel resembling the "conical cup" of southwest Iran and Mesopotamia (Potts 1980:512–14; the latter is referred to as "conical solid-footed goblets" by Lamberg-Karlovsky and Tosi 1973:37, fig. 114 and "solid-footed chalices" by Kohl 1974:240). The "conical cups" occur in Banesh contexts in Fars (Potts 1980:514, citing I. Nicholas and W. Sumner), and in Jemdet Nasr through Early Dynastic II levels at Warka (Adams and Nissen 1972:99); Potts considers the Yahya conical cups closer to Mesopotamian than to Proto-Elamite forms.

A vessel type that appears in quantity in the Persian Gulf room as well as in later Yahya IV deposits is a large, orange storage vessel with applied meandering snakes or snakelike ridges (Potts 1980:190, 517–18; Lamberg-Karlovsky and Tosi 1973:fig. 113). Similar vessels occur in Mundigak IV and Anjira IV (Lamberg-Karlovsky and Tosi 1973:41), and in the Umm an-Nar culture of Oman (Potts, this vol., chap. 4). They are also found in "Proto-Imperial" levels on the Acropole at Susa (Stève and

Gasche 1971:pl. 73:1–4). This vessel form was not found in the Ville Royale I sounding, but applied snakes do occur in Ville Royale I:18 (Carter 1980:14:11).

Kohl dates the "Persian Gulf Room" to Early Dynastic II/IIIA based on the presence of chlorite vessels assigned to the International Style (Potts 1980:510–11; Kohl 1974:235–45). A stamp seal with caprid, bull(?), and crescent moon from just above the floor of the IVB5 Persian Gulf Room is considered an early example of the Persian Gulf style, dated from Early Dynastic to late Akkadian/Ur III times in Mesopotamia (Potts 1980:403, 528–29, 536, fig. 66C).

To summarize, the most diagnostic artifacts within Yayha IVB5 suggest a range from Early Dynastic III through Akkadian times. If so, the beveled-rim bowls and conical cups, dated to Early Dynastic II at the latest, may be derived from earlier contexts; quantitative data on their distribution are needed to resolve this question.

3. *The Yahya IVB4–1 phase* is defined by four occupational strata which Potts thinks lead directly to IVA, in contrast to the initial interpretation of a discontinuity between IVB and IVA (Potts 1980:572–79; Lamberg-Karlovsky 1970a:34, 1974:39). A stamp seal with two feet on one side and a scorpion(?) on the other is now assigned to Yahya IVB2, rather than to the Persian Gulf Room as originally reported (Potts 1980:527, fig. 66a; see also Lamberg-Karlovsky 1971a:92). Given the degree of continuity in the ceramics, a general date of Early Dynastic II/III to Akkadian must also be applied to Yahya IVB4–1.

H. *The Yahya IVA (Elamite) period* is defined in Areas A, B, and BW of the South Trench (Potts 1980:575). The Black-on-Red-on-Orange Ware that indicated a relationship between Yahya IVB and sites in Baluchistan continues. Incised or stamped potters' marks are now common and can be related by morphology as well as by associated vessel shapes to Shahdad, where both are characteristic of the later cemetery area (Potts 1981; see also "Shahdad"). Artifacts of "probable Indus origin or style" found in IVA contexts are not considered useful for dating (Potts 1980:586–87).

Specific parallels with the west are few. A single sherd of Kaftari Ware from Fars was found, and Yahya VA Brown Banded Ware "bears a very general resemblance to some examples of the Kaftari Painted Buff Ware of Malyan" (Potts 1980:570–71; Sumner 1974:173, figs. 7, 9). Chlorite bowls with a dot-in-circle motif can be assigned to Miroschedji's Late Group; they provide a correlation with Susa VB and by extension, the Ur III period (Potts 1980:581; see "Western Susiana"). On Failaka Island such bowls are associated with nearly five hundred Late Gulf Seals, dated by epigraphic evidence to the Old Babylonian period (Potts 1980:582–84). These and other parallels support a date somewhere within the range spanned by Ur III to the Old Babylonian period (Potts 1980:579, 583–86).

The Bampur Sequence

The Bampur Valley in Persian Baluchistan lies on a route linking central Iran to southern Baluchistan and Pakistan. In 1932 Sir Aurel Stein conducted a surface survey and test excavations at the sites of Bampur, Chah Huseini, and Khurab (Stein 1937:104–31). The mound at Bampur was again excavated in 1966 by Beatrice de Cardi under the sponsorship of the Royal Asiatic Society and the British Academy (de Cardi 1967a, 1967b, 1968, 1970). De Cardi cleared a total area of 24 m² in two trenches, Y and Z. The latter reached virgin soil at −7 m below the mound surface (de Cardi 1970:fig. 6); this depth was divided into 6 "periods"/levels, numbered I–VI from bottom to top.

A. *The Chah Husseini period* is defined by stratigraphically mixed and surface material (Lamberg-Karlovsky and Schmandt-Besserat 1977:130; Stein 1937; Tosi 1974). A Black-on-Red-Slipped sherd and a chevron-painted beaker excavated by Stein at Chah Husseini are paralleled in pottery of Yahya V (Lamberg-Karlovsky 1969:186; Stein 1937:pls. XXV, XXIX, XXXIV:18; see also Lamberg-Karlovsky and Schmandt-Besserat 1977:fig. 8:1–5; Tosi 1974: 31). Chevron-painted beakers are also characteristic of Iblis II (see "Iblis"). De Cardi (cited in Tosi 1979:31) relates this material to the Geoksiur culture of southern Turkmenia.

B. *The Early Bampur period* is defined by levels I–IV of the de Cardi excavation at Bampur (de Cardi 1970; see also Tosi 1974). Caprid heads painted in bands below the rims of small Gray Ware bowls are related to vessels found in burials excavated by Stein at nearby Khurab (de Cardi 1970:294, 297, figs. 28:269, 29:300; Lamberg-Karlovsky and Schmandt-Besserat 1977:127, fig. 7:13; Stein 1937:pl. XXXIV:15). The position of the site as a crossroads is reflected by ceramic comparisons. Tosi links Bampur I–IV to Shahr-i Sokhta II–III and Mundigak IV_{1-2} (1974:32, figs. 4, 13, table 1 with comparanda). Bampur II–III is firmly tied to Yahya IVC (Lamberg-Karlovsky 1971a, 1972a; Potts 1980:519). Incised Gray Ware vessels have parallels in Kulli 460 km to the east (de Cardi 1970: 324–25).

C. *The Later Bampur period* is defined by levels V–VI in de Cardi's excavation at Bampur (1970). Ties with the east and Sistan do not cease, since numerous sherds of Bampur VI pottery occur in the Burnt Building of Shahr-i Sokhta IV as well as on the surface of sites in the Rud-i Biyaban (Tosi 1974:33, fig. 4). Contacts with the west and with sites across the Persian/Arabian Gulf, however, appear to be more important. To the west, Bampur V–VI designs and shapes in Black-on-Red Ware are most similar to those of Yahya IVB (Potts 1980: 519; Lamberg-

Karlovsky 1971a:80, 1977; Tosi 1974:33). The distinctive Black-on-Gray Ware of VI provides a link to the Umm an-Nar culture of Oman (de Cardi 1970:268–69, 318, fig. 43:475–84, table 5; Tosi 1974:36, fig. 4). Finally, ceramic copies of chlorite vessels, designated as Incised Gray Ware, are common in Bampur V–VI (de Cardi 1970:320–25, figs. 54–46). Rare parallels for these vessels occur in Yahya IVB4–1 (Lamberg-Karlovsky 1977; Lamberg-Karlovsky and Tosi 1973:figs. 97, 99), and they are also found at Hilli and Umm an-Nar on the Gulf (de Cardi 1970:325). Tosi (1974:33, fig. 3; see also de Cardi 1970:266) has suggested a correlation of Bampur VI with the Qaleh/Shogha period in Fars, but the latter is much later, securely dated to the mid and late second millennium (Jacobs 1980).

The Hilmand Basin Sequence

Sistan provides a long-distance link between southern Iran and the Turkmenistan-Afghanistan area. The key site is Shahr-i Sokhta, a large, well-preserved settlement that provides a well-stratified sequence. It was excavated by the Italian Archaeological Mission of IsMEO from 1967 to 1978 under the direction of M. Tosi (1968, 1969a, 1970, 1972a, 1976a, 1976c, 1983a, 1983b; Lamberg-Karlovsky and Tosi 1973; Tosi and Piperno 1975; Amiet and Tosi 1978; Piperno 1977, 1978; Salvatori 1979). Additional information was obtained from a pottery-manufacturing site called Rud-i Biyaban (Tosi 1972b).

A. *The Shahri-Sokhta I period (phases 10–8)* is defined by limited test trenches (Amiet and Tosi 1978:9–10, 20; Tosi 1976a). The ceramics, predominantly buff wares, have paneled designs similar to those found in Mundigak III, and on Quetta Ware in Baluchistan (Amiet and Tosi 1978:22, figs. 12–14; Lamberg-Karlovsky and Tosi 1973:26, figs. 6, 14; Casal 1961:figs. 53–59). Imports include two sherds of Gray Streak-Burnished Ware of Yahya IVC–IVB5 type (Amiet and Tosi 1978:fig. 3; Lamberg-Karlovsky and Tosi 1973:fig. 10) and three sherds of Nal Polychrome (Amiet and Tosi 1978:22–23, fig. 4a–c; see also Shaffer, this vol., chap. 26). The pottery also shows strong connections to Namazga III in southern Turkmenistan (Amiet and Tosi 1978:10–11; Biscione 1973; Lamberg-Karlovsky and Tosi 1973:24, figs. 4–13; Sarianidi 1983:figs. 1–7); this evidence supports a correlation of Shahr-i Sokhta I and Yahya IVC, where Namazga III pottery was also found (R. Biscione, cited by Lamberg-Karlovsky in pers. comm. 1971).

Seals and sealings excavated from Shahr-i Sokhta I are stylistically related to Proto-Elamite settlements (Amiet and Tosi 1978:24–25). A cylinder seal fragment is similar to examples found at Susa in Acropole I:16–14 (Amiet and Tosi 1978:28, fig. 35). Other seals of period I are of Early Dynastic I type in Mesopotamia (Amiet 1983:207–8). A Proto-Elamite tablet from the earliest phase is also related to Susa Acropole I:16–13 (Amiet and Tosi 1978:24, fig. 16; Tosi 1976a:168).

B. *The Shahr-i Sokhta II period (phases 7–5,)* defined primarily in the East Residential Area, is the best preserved and most widely exposed occupation at the site (Biscione, Salvatori, and Tosi 1977; Tosi 1983b:103–19, figs. 8–10, 14–16). The pottery is simply a standardized version of period I forms and decoration (Lamberg-Karlovsky and Tosi 1973:54, figs. 21–27). In this and the following period, parallels between Shahr-i Sokhta, Bampur III–IV, and Mundigak IV_{1-2} are sufficient to lead Tosi to conclude that they are "one culture" (Tosi 1974:32; see also Lamberg-Karlovsky and Tosi 1973; de Cardi 1968:144). Much copper metalworking is evidenced at Shahr-i Sokhta, and compartmented copper or bronze stamp seals appear; a flat, square stamp seal is a type known in Mundigak III and IV in Afghanistan (Amiet and Tosi 1978:22–28, fig. 24). A figurine of Namazga III type comes from the upper levels of Shahr-i Sokhta II (Tosi 1972b:175).

C. *The Shahr-i Sokhta III period (phases 4–3)* is defined by structural remains in the central part of the site (Tosi 1976c:142, table 1; 1983b:119–21, fig. 17), supplemented by evidence from the Rud-i Biyaban kilns (Tosi 1970:189, 1972b:175). Pottery, lithics, metalworking, building techniques, brick typometry, figurines, and seals provide a close identity with Mundigak IV_{1-2} (Lamberg-Karlovsky and Tosi 1973:26). Fine Black-on-Gray Ware, already present in Shahr-i Sokhta I, becomes common in periods II/III, permitting a correlation with Bampur IV–V and Yahya IVC–B (Lamberg-Karlovsky and Tosi 1973:39–41, figs. 107, 143–46; (see "Yahya"). Copper or bronze stamp seals are similar to those found at Namazga IV–V in Turkmenia, and in Hissar III (Lamberg-Karlovsky and Tosi 1973:figs. 41–49; see "Damghan/Khorasan"; see also Kohl, this vol., chap. 7).

D. *The Shahr-i Sokhta IV period (phases 2–1)* is defined by burned structures on the southeast corner of the mound (Lamberg-Karlovsky and Tosi 1973:28, figs. 71–72; Tosi 1983b). Sherds of Incised Gray Ware, found only in period IV at Shahr-i Sokhta (Lamberg-Karlovsky and Tosi 1973:figs. 147–50), provide a direct correlation with Shahdad (Lamberg-Karlovsky and Tosi 1973:43, n. 100, 44), Late Bampur, and Yahya IVB (see "Yahya"). Black-on-Red Ware with appliquéd "snakes" also links Shahr-i Sokhta IV with Yahya IVB (Lamberg-Karlovsky and Tosi 1973:28, 43, fig. 65), and "numerous finds of Bampur VI pottery" from the Burned Building indicate contact with Late Bampur and sites such as Hili in Oman (Tosi 1974:33, fig. 4). A shallow dish with painted interior, again from the Burned Building, closely parallels one from Mundigak IV_3 (Lamberg-Karlovsky and Tosi 1973:figs. 67–68).

Radiocarbon Evidence for Southeastern Iran

The earliest radiocarbon determinations for this region are from deposits at Tepe Gaz Tavila which is contemporary with or earlier than Yahya VII. They form a consistent series, dating the initial settlements in Kirman to the middle of the sixth millennium (table 2). This is compatible with the relative dating that correlates Yahya VII with the Mushki to Shamsabad range in Fars, and two dates for Shamsabad at the end of the sixth millennium (table 2). The next cluster of dates comes from Yahya VI and Iblis I, placed contemporary with one another on ceramic grounds. Although there is a considerable range in the Iblis dates, a general date for this material in the middle of the fifth millennium is suggested.

The radiocarbon dates for later periods at Yahya are highly inconsistent, with the exception of four samples from period IVC or the Proto-Elamite period, which overlap within the last quarter of the fourth millennium. This is compatible with the large series from the closely related Middle Banesh assemblage at Malyan (tables 1–2). The long series of dates from Shahr-i Sokhta begins with a single date for phase 10 (Tunc-61), which places it contemporary with other Proto-Elamite settlements. Large clusters of samples from Shahr-i Sokhta II and III overlap, with a CRD average at the middle of the third millennium. A cluster from period IV produced a corrected average range from 2405–2180 B.C. (table 1). Artifact parallels place Shahr-i Sokhta II–IV roughly parallel to Yahya IVB, which is in turn linked to the Early Dynastic II to Akkadian periods in Mesopotamia. Thus the Shahr-i Sokhta radiocarbon evidence supports the long span suggested for Yahya IVB by artifact parallels (see "Yahya").

Central Western Iran

Western Luristan

Recent excavations within the regularly folded mountain zone of western Luristan are limited to the Pusht-i Kuh in the south and the Hulailan Valley in the north. Investigation of the prehistory of other valleys has been less intense, but some information is available from a survey with limited soundings by Sir Aurel Stein (1940) and surveys conducted by Clare Goff (1971). These studies have been integrated with the major sequences by E. Henrickson (1985b) and R. Henrickson (1984b, 1986b, 1987) and will not be discussed here.

The Pusht-i Kuh Cemetery Sequence

This region has contact with Mesopotamia via the Diyala, and with Susiana via Deh Luran. Excavations have been carried out by Louis Vanden Berghe at Dum Gar Parchinah (1975a, 1975b); Hakalan (1973b, 1973c, 1974); Bani Surmah (1968b); War Kabud (1967, 1973c); and Kalleh Nissar (1970a, 1971a, 1973a). He also surveyed the region for eleven seasons between 1965 and 1975 (Vanden Berghe 1967, 1968b, 1970a, 1970b, 1971b, 1972a, 1972b, 1973b, 1975b; see also Vanden Berghe 1973c, 1979). Apart from a small area of domestic architecture at Kalleh Nissar, all of the excavated material comes from graves. The chronological ordering of this material into three major units is thus based entirely on artifact comparisons with other regions rather than on stratigraphy.

A. *The Chalcolithic period* is defined by excavations in the cemeteries at Dum Gar Parchinah and Hakalan on the Mehmeh River. At Hakalan 35 large rectangular tombs constructed of stone slabs contained single inhumations and a few multiple burials (Vanden Berghe 1973b, 1974:figs. 1–2). At Dum Gar Parchinah, 156 tombs similar to those at Hakalan were opened (Vanden Berghe 1975a:46–47, figs. 1–3; 1975b:49–54; 1976:165). The only settlement data for this period come from Area C at Kalleh Nissar (Vanden Berghe 1970a:67 lower left, 70, 73 bottom; 1973a:fig. 1, pl. 22). It has been suggested that the cemeteries were constructed by pastoral nomads (Vanden Berghe 1975b:60–61; E. Henrickson 1985a).

Rare Black-on-Plum Ware vessels from these cemeteries (Vanden Berghe 1973b:51:vessel 3, 52:vessels 2–3; 1974:figs. 3:3, 4:2–3; 1975a:47) are similar to pottery found at sites in Susiana dated to the Susa A/Susa I period (Dollfus 1971:fig. 12:16–24; pers. comm. 1985) and have been identified with the "Black-on-Red" Ware found in the Maran phase in the Mahidasht (E. Henrickson 1985a:33–34, 1985b:79, table 5). Hakalan and Parchinah Black-on-Buff Slipped Ware bearing geometric, vegetation, and animal motifs (Vanden Berghe 1973b:51–56, 1974:figs. 3–6, 1975a:figs. 5–7, 1975b:51–52) is similar but not identical in fabric to the "Red-White-and-Black Ware" characteristic of the Maran phase (E. Henrickson 1985b:73, 79, n. 31); strong stylistic parallels can also be drawn between these ceramic groups (E. Henrickson 1983:fig. 108:7; Vanden Berghe 1974:fig. 6, 1975a:fig. 6:10–11; E. Henrickson 1983:109:1; Vanden Berghe 1975a:fig. 5:10; E. Henrickson 1983:fig. 103:3, 7, 11; Vanden Berghe 1975a:fig. 5:1). Stylistic parallels with Susa A Black-on-Buff Ware are less precise, but include high ring or pedestal bases (Dollfus 1971:fig. 9:9, 12; Vanden Berghe 1975a:fig. 6:19) and squat jugs with small lugs, decorated with panels on the shoulders (Dollfus 1971:fig. 16:10, 17:6; Vanden Berghe 1975a:fig. 6:15–16, 18).

A comparison of ceramic forms and designs from the Pusht-i Kuh cemeteries with those from Deh Luran and Mesopotamia suggests that some graves are earlier than the horizon represented by Susa A and the Maran phase.

Rare parallels are found in the Farukh phase in Deh Luran (Vanden Berghe 1975a:fig. 6:15; Wright 1981:fig. 24h–j). There are also overall similarities in style, especially the use of unusual combinations of complex motifs and of overall designs, which link Hakalan/Parchinah and Gawra XIII or Ubaid 4 (Tobler 1950:pls. CXXVII–CXXX). Globular pots with spouts and/or basket handles are found in the Eridu cemetery (Safar, Mustafa, and Lloyd 1981:pl. 5:3; Vanden Berghe 1974:fig. 3:1), also assigned to late Ubaid 4 (Porada, et al., this vol., chap. 5; for additional Ubaid 4 parallels see Zagarell 1982:70–72).

Other artifacts repeat the pattern. Animal figurines with fused legs are found in Susa A contexts at Jaffarabad levels 3–1 and Parchinah (Dollfus 1971:fig. 22:5, 8, 10–11, 13; Vanden Berghe 1975b:58; see also Amiet 1966:fig. 5). A standing female figurine from Parchinah (Vanden Berghe 1975a:fig. 8, 1975b:46, 57–58) duplicates in form and posture late Ubaid 4 figures from cemeteries in Mesopotamia (Porada et al., this vol., chap. 5; Safar, Mustafa, and Lloyd 1981:fig. 115; Woolley 1955:pls. 20–22). Stamp seals from Hakalan and Parchinah have good parallels in Gawra XIII–XII (Vanden Berghe 1975b:59; see Tobler 1950:pls. CLX:35, CLXI:48, CLXIX:168; Vanden Berghe 1973b:57, 1975b:59). Round, pear-shaped, and ridged maceheads are paralleled in Gawra XII–IX (Vanden Berghe 1973b:57–58; 1974:70–71, fig. 9; 1975a:fig. 3:6–7, fig. 10; 1975b:59, lower; Tobler 1950:pl. CLXXVII:30–35).

B. *The Early Bronze I period* is defined by excavations at the cemetery sites of Bani Surmah, Kalleh Nissar, Dar Tanha, War Kabud (Mihr), Takht-i Khan, and Qabr Nahi (Vanden Berghe 1972a:2, 1973c:208). Characteristic are large collective tombs made of stone (Vanden Berghe 1968b:54, 60–61, 1970b:figs. 9–10) which contained plain, painted monochrome and polychrome pottery (Vanden Berghe 1968b:59, 1970a:69, 1970b:fig. 11) and numerous metal artifacts (Vanden Berghe 1968b:58, 59:bottom, 1970b:figs. 12–13, 1972a:2, fig. 3).

The polychrome pottery is described as a "late and provincial variety" of Diyala "Scarlet Ware" (Vanden Berghe 1973c:208). The arrangement of motifs in horizontal bands suggests a closer relationship to Deh Luran than to the Diyala (see also Carter 1987); a more precise relative date may emerge when specific designs from the Pusht-i Kuh are compared with stratified examples from Farukhabad (see Wright 1981:115–25). Calcite and serpentine cylinder seals, including scenes of diagonal animal fights, appear to be Early Dynastic II–III in date (Vanden Berghe 1972a:2, 1968b:56). Socketed axes are paralleled in Susa IV(A?), independently correlated with Early Dynastic II–III (Carter 1980:fig. 22c; Vanden Berghe 1968b:58, upper; see also "Western Susiana"; Carter 1984:141).

C. *The Early Bronze II period* is defined by Kalleh Nissar Area AII, with additional information from Darwand, Kazab, Gululali Galbi, and Sardant (Vanden Berghe 1972a:3, 1973c:208). Kalleh Nissar AII produced individual stone tombs (Vanden Berghe 1972a:fig. 4; 1973a:27, 29, figs. 6–11, pls. 12–21). Plain Ware vessels occur in forms typical of the Akkadian to Ur III period in Mesopotamia (Vanden Berghe 1970a:71 lower right; 1973a:27, pl. 15, figs. 7, 9, 11–12). Goblets with pointed base and flared, grooved rims (Vanden Berghe 1973a:fig. 12) are most common in Ur III levels at Nippur (McGuire Gibson, pers. comm. 1984) and are characteristic of the Susa VB or Shimashki period, also dated to Ur III (see "Western Susiana"; Carter 1984:fig. 10). Monochrome Painted Ware with simple geometric designs seems to be local (Vanden Berghe 1973a:fig. 9:2, pl. 14). Two cylinder seals have crudely cut designs paralleled in the Diyala at the end of the Akkadian and Post-Akkadian periods (Vanden Berghe 1973a:28, fig. 14, pl. 21).

The Hulailan Sequence

An intensive survey of the Hulailan Valley was conducted from 1962 to 1974 by the Danish Archaeological Mission under the directorship of Jørgen Meldgaard and Peder Mortensen (Meldgaard, Mortensen, and Thrane 1963; Mortensen 1974a, 1974b, 1975a, 1975b, 1976, 1979). These data were augmented by a deep sounding (Trench GI) cut into Neolithic deposits at Tepe Guran. Twenty-one "main" strata were distinguished, with levels A–C dating to post-Neolithic periods and with V resting on virgin soil (Meldgaard, Mortensen, and Thrane 1963:fig. 9; Mortensen 1963:110). Surveys specifically aimed at late prehistoric material were conducted by Thrane (1964) and Goff (1966, 1971).

A. *The Early (Aceramic) Neolithic period* is defined by Guran GI:levels V to T, the lowest 1.5 m of the mound. Until the final report is published, there is no means of determining the date of this occupation relative to other aceramic sites in the region. Mortensen (1974b:25) has suggested that basal Guran is contemporary with the latest levels at Ganj Dareh. A multiple secondary burial cut into virgin soil may indicate a relationship between Aceramic Guran and the late Bus Mordeh/early Ali Kosh period at Tepe Ali Kosh, which contained a similar grave (Hole, Flannery, and Neely 1969:248; Mortensen 1963:112).

B. *The Middle to Late Neolithic period* is defined by Guran GI:levels S to D. This sequence provides evidence of change in the ceramic industry which is of critical importance for the relative chronology of the Neolithic in the Zagros (Mortensen 1962, 1964). To simplify discussion and facilitate comparisons we have divided Guran into ceramic phases. These are tentative and will bear revision when the complete assemblage is published.

1. *The Guran Archaic phase* is defined by levels S to P. Level S marks the appearance of Undecorated Grayish Brown Ware, lightly fired with a wet-smoothed or burnished surface (Mortensen 1963:113, fig. 14). The photographs and published description of a vessel from Ganj Dareh D (Smith and Crépeau 1983) appear similar to Undecorated Grayish Brown Ware. In levels R to P Undecorated Grayish Brown Ware continues, but more characteristic is better-fired Undecorated Buff Ware which appears in Level R and continues through the rest of the sequence (Mortensen 1963: 114, fig. 16g–h).

Also found in R are very small quantities of Archaic Painted Ware, decorated with red motifs including reversing Y's in a zone immediately above the base, and triangles or Y's at the rim (Mortensen 1963:114–16, figs. 15, 16a–b). Archaic Painted Ware has not been reported from any other site in the central Zagros. Farther east, chaff-tempered pottery with a Y design has been found at Qal'eh Rostam II (Nissen and Zagarell 1976:162–63; Zagarell 1982:22, 25, fig. 9:1). Although the excavators relate this material to Guran Archaic Painted Ware, both vessel form and the placement of designs on the vessel differ; moreover, most of the unpainted Qal'eh Rostam II pottery has a highly polished red slip, suggesting a date at the end of the Hulailan Neolithic sequence for this assemblage.

2. *The Zagros Standard Painted Ware phase* is defined by Guran levels O to E. Characterized by red designs on a buff ground, it has four variants with differing chronological distributions: Jarmo Tadpole Ware (O–H, with its greatest frequency in M); Sarab Tadpole and Sarab Geometric Wares (L–D, with frequency peaks in levels L and D); and Guran Close-Patterned Ware (K–D, with a peak in H–F)(Mortensen 1964:fig. 7). The Jarmo, Sarab Tadpole, and Guran variants have dense, often negative designs composed of small geometric elements repeated along diagonal lines (Mortensen 1963:116–17, figs. 16c–f, 17; Oates 1973:pl. XVII:A). Sarab Geometric Ware is unusual, with bands of negative lozenges or zigzags at the rim and carination (Mortensen 1963:fig. 18).

Although Mortensen originally lumped Sarab Tadpole and Sarab Geometric Wares, a more recent assessment indicates that Sarab Tadpole appears before Sarab Geometric in the Guran sequence (Levine and McDonald 1977:43, based on a communication from Mortensen). Survey data also indicate that these wares have slightly different chronological distributions: in Hulailan, Tepe Faisala produced Sarab Geometric without Sarab Tadpole (Mortensen 1974b:fig. 22); in the Mahidasht, Sarab Tadpole and Geometric co-occur only at Tepe Sarab, while at four other sites they occur separately (Levine and McDonald 1977:43, fig. 3).

Zagros Standard Painted Ware is widely distributed. Jarmo Tadpole was found in the lower pottery-bearing deposits at Jarmo (Op. II:5–3; Adams 1983:215–17). The illustrations in the final report show only this motif in the earliest ceramic level, II:5, suggesting that it is contemporary with Guran N–O. At Tepe Sarab, Jarmo Tadpole is found with Sarab Tadpole and Sarab Geometric Wares in the early or SI deposit (McDonald 1979: 141, table 5; see also "Mahidasht" and "Godin"); since Guran Close-Patterned is not present, SI is probably contemporary with the middle of the Neolithic deposit at Guran.

Relationships with the Mandali area in central Mesopotamia are documented by surface remains from Tamarkhan and a few sherds similar to Guran Close-Patterned Ware in a late Samarran context at Chogha Mami (Mortensen 1974b:25; Oates 1973:pl. XVIIB:3, 6; Oates and Oates 1976:63, lower, row 1:2, row 2:2). Tamarkhan represents a lowland settlement within the Zagros Neolithic tradition (Oates 1968:3–4). The recovery of a small number of sherds of Tadpole Ware indicates that at least part of the Tamarkhan deposit must be contemporary with the Zagros Painted Ware phase at Guran, although numerous highly burnished red to orange chaff-tempered sherds suggest that the occupation continues somewhat later. The latter possibility, plus the presence of middle/late Samarran trade sherds at Late Neolithic sites in the Zagros (q.v.), implies that the Zagros Painted sherds from Chogha Mami were derived from an earlier context. This is supported by evidence from Deh Luran: the Mohammad Jaffar phase, probably contemporary with the latest Zagros Standard Painted Wares, is also correlated with early Samarra (see "Deh Luran").

3. *The Red-Burnished Ware phase* is defined by the latest Neolithic deposit at Guran, and by survey material. Red-Burnished Ware appears in Guran H and increases rapidly in popularity, becoming dominant by level D (Mortensen 1964:fig. 7, 1963:117–18, fig. 16i–k). Sar Arsiaban, a site discovered by the Hulailan survey, produced only Guran Buff Ware and Red-Slipped Ware (Mortensen 1974b:25–26, fig. 24); Mortensen places it slightly later than Guran, representing a period during which Zagros Standard Painted Wares are rare or absent (1974a:fig. 35). The Guran Red-Burnished Ware phase is contemporary with Late Sarab (see below), and by extension with the linear painted pottery of Sefid and Surkh in Deh Luran and Hajji Firuz in Azerbaijan (see "Hasanlu").

C. *The Early Chalcolithic period* is defined by surface material. Probably transitional from the Neolithic is Tepe Chena A, which produced chaff- and sand-tempered pottery that was often burnished and rarely decorated with black and/or red paint (Mortensen 1974b:28, fig. 29; 1976:43). This Chena Buff Ware is similar to pottery from Chogha Mish Archaic 2–3 (Mortensen 1976:43). More typical of the Early Chalcolithic were sites with grit-tempered "Susiana Black-on-Buff" sherds, such as the Kazabad mounds and Sil Kuska (Mortensen 1974b:28–29, figs. 31–33; 1976:43, figs. 2–3). Although this material has been compared to Hakalan and Parchinah by Mortensen (1976: 43), this dating is rejected here because of synchronisms between the Pusht-i Kuh Chalcolithic and the Hulailan Middle Chalcolithic (see below). E. Henrickson (1985b:83) considers the designs on published sherds of Hulailan Early Chalcolithic Black-on-Buff to be more closely related to Seh Gabi and Late Siahbid (see "Mahidasht" and "Godin"). This earlier dating is supported by a series of vague but clustered design parallels with Bendebal 14–12 which tie the Early Chalcolithic to the latest part of the Chogha Mish period (Dollfus 1983:figs. 81:15, 82:8; Mortensen 1976:fig. 2h; Dollfus 1983:83:9, 86:10; Mortensen 1976:fig. 2b), and by parallels with Gawra XIII (Mortensen 1976:fig. 2e; Tobler 1950:pl. CXXVII:173; Mortensen 1976:fig. 2d; Tobler 1950:pl. CXXX:207).

D. *The Middle Chalcolithic period* is defined by survey material from sites such as Kahreh Tappeh, War Cheshmeh C, Tepe Cheshmeh Mahi, and Mina Khan Kushia (Mortensen 1976:44). Imported sherds of Susa A Black-on-Buff Ware established a relative date for the Hulailan Middle Chalcolithic. For example, a beaker with a row of long-necked birds from War Cheshmeh C is duplicated in Bendebal 10 (Dollfus 1983:fig. 88:12; Mortensen 1976:fig. 4a); a large jar with solid painted neck and bands with triangles from Mina Khan Kushia (Mortensen 1976:fig. 5a) is found in Jaffarabad 3 (Dollfus 1971:fig. 17:3, 6). Sherds of Black-on-Plum Ware (Mortensen 1976:fig. 5) link the Hulailan Middle Chalcolithic not only to Susa A, but also to sites throughout the Zagros, including Hakalan and Parchinah, and the Maran phase in the Mahidasht (E. Henrickson 1985b:74, 87–88, table 5 with refs.; see also "Mahidasht" and "Godin"). Middle Chalcolithic Coarse Ware from Mina Khan Kushia (Mortensen 1976:44–45, fig. 6) is related to the Sargarab Horizon, and may represent a transition to the Hulailan Late Chalcolithic (see below).

E. *The Late Chalcolithic period* is defined by surface material from Chia Fatela Bosurk and Cheshmeh Sardeh (Mortensen 1974b:figs. 38–39, 1976:45, figs. 7–9). Excellent parallels for this ceramic assemblage can be found in the pottery of Godin VI and VI/V (Mortensen 1976:45, fig. 7a; Young 1969:fig. 8:12, 9:6; Mortensen 1976:fig. 7g; Young 1969:fig. 9:1, 3, 10; Mortensen 1976:figs. 8, 9d, f; Young 1969:fig. 8:4), Kunji Cave (Wright et al. 1975:fig. 6i–j, n–o), Baba Jan V (Goff 1971:fig. 7), and Sargarab ("Deh Luran," with refs.). The presence of beveled-rim bowls (Mortensen 1976:figs. 7f, 9e) firmly links part of the Hulailan Late Chalcolithic to Godin VI/V and Late Uruk (see "Mahidasht" and "Godin"; see also Mortensen 1974b:32).

F. *The Bronze Age* is poorly known in Hulailan. There is apparently a hiatus after the Late Chalcolithic (Mortensen 1976:45–46). The next period to be identified has been equated with Godin III (R. Henrickson 1984a:770–71, table 25; Mortensen 1974b:33–45); published sherds indicate that some survey material is contemporary with Godin III:5 (Goff 1966; R. Henrickson 1984a:table 35).

The High Road and Eastern Luristan

The northern part of the region designated here as Central Western Iran consists of a series of valley systems running roughly east and west. These formed a segment of the great trade route or High Road that crossed from the vicinity of Baghdad through the Zagros to the central plateau. In discussing the archaeology of this large area, it is convenient to break it into large zones: the western end of the High Road or the Kermanshah region, and the eastern end of the High Road or the Kangavar region. Eastern Luristan lying to the south of the Kangavar region is less known, but seems generally to have formed part of a culture area that included the eastern segment of the High Road. Sites in eastern Luristan will therefore be incorporated within the description of the Kangavar regional sequence.

Kermanshah Region: The Mahidasht Sequence

Most studies of the archaeology of the western end of the High Road have focused on the broad Mahidasht, Kermanshah, and Bisitun Plains, and smaller immediately adjacent valleys. The first systematic research was conducted by the Iranian Prehistoric Project of the Oriental Institute of Chicago under the direction of Robert J. Braidwood in 1959–60 (Braidwood 1960a, 1960b, 1961; Braidwood, Howe, and Reed 1961). In addition to surface survey in the Kermanshah, Mahidasht, and adjacent western valleys, small-scale excavations were carried out at Asiab, Sarab, Siahbid, and Deh Savar Tepes. A specific investigation of the Early Neolithic period was undertaken in valleys to the south of Bisitun by Philip E. L. Smith for the Université de Montréal. Excavations at the site of Ganj Dareh were carried out from 1967 to 1974 (Smith 1967, 1968, 1970, 1972a, 1972b, 1974, 1975, 1976), followed by an intensive survey with Peder Mortensen (Smith and Mortensen 1980; Smith and Young 1983). Building on the Chicago team's work, a large-scale program of research covering all periods of occupation has been carried out by the Mahidasht Project of the Royal Ontario Museum under the direction of Louis D. Levine in 1975 and 1978. In addition to a systematic surface survey of the Kermanshah and Mahidasht

Plains, it included soundings at Sarab, Siahbid, and Chogha Maran (E. Henrickson 1983, 1985b; McDonald 1979; Levine 1974, 1976a, 1976b; Levine and McDonald 1977).

A. *The Early Neolithic (Ganj Dareh) period* is defined by excavations at Tepe Ganj Dareh, supplemented by a test at Tepe Asiab and survey data (Smith and Young 1983:146–48, fig. 2) Ganj Dareh is a village site located in a small side valley between Bisitun and Harsin. The earliest of five phases of occupation (level E) is interpreted as a camp; well-preserved mud-built buildings were recovered in level D, which was destroyed by fire (Smith 1975, 1976). Asiab is a low mound on the Kermanshah Plain which contained a large circular depression interpreted as a pit house (Braidwood 1960b; Braidwood, Howe, and Reed 1961; Flannery 1983:170–71; Howe 1983:115–17, 126–28; Smith and Young 1983:fig. 2); the associated chipped stone industry is considered very similar to that from Ganj Dareh E (Howe 1983:115, 118).

The relative dating of Ganj Dareh and Asiab must at present rest on preliminary statements by scholars who have firsthand knowledge of one or both sites. Howe states that the earliest material, from Asiab and Ganj Dareh E, includes chipped stone industries "strikingly like" those from Karim Shahir and Zawi Chemi Shanidar (Howe 1983:118, 129–32). Within Luristan, the chipped stone industry from Abdul Hosein is said to be "fairly close" to that from both Mahidasht sites (Pullar 1979:154). Smith (1976:13) considers Asiab and Ganj Dareh to be contemporary with the Bus Mordeh phase at Ali Kosh.

B. *The Middle to Late Neolithic period* has been defined at Tepe Sarab, a very low mound, with two "lobes" separated by a central north-south depression. In 1960 the Iranian Prehistoric Project placed a major excavation unit on each lobe: SI on the west, and SV on the east (Braidwood 1960a; McDonald 1979:131–33; 216–20, pls. VI–IX, figs. 15–19). Although Braidwood considered Sarab to be a single-period site, an analysis of the pottery led Mary McDonald to conclude that the ceramic assemblages represented in SV and SI differed significantly (McDonald 1979:133 and following). In 1978 the Royal Ontario Museum made additional soundings, Operations 1–3, adjacent to the 1960 trenches; these indicated that there were two distinct phases of occupation lying side by side, and the Sarab period has accordingly been divided into two phases (McDonald 1979:311–12).

1. *The Early Sarab phase* is documented by Area SI and Operation 2 (McDonald 1979:197, 311). In Operation 2, almost all of the sherds were of chaff-tempered Buff Ware and of Sarab Standard Painted Ware, including both Tadpole and Geometric variants (McDonald 1979:311; Levine and Young 1987:fig. 1, upper; for ware descriptions see Levine and McDonald 1977:40). In the larger SI sample of decorated vessels, tadpole motifs predominated, with the Jarmo style much more common than the more densely painted Sarab style (McDonald 1979:141, 144, fig. 11, pls. I–II). The Early Sarab phase is therefore approximately contemporary with the Zagros Standard Painted Ware phase in Hulailan, especially the time before the introduction of Red-Slipped Ware (Guran H; see "Western Luristan"). Tadpole Wares also link it to the earliest ceramic levels at Jarmo, J–II:5–4? (McDonald 1979:195–98).

2. *The Late Sarab phase* is documented by Area SV and Operations 1 and 3 (McDonald 1979:312). It has also been found in test excavations conducted at two sites by the Mahidasht Project: Tepe Siahbid, Operation I:levels 106–3; and Chogha Maran, Operation III: below 306 (E. Henrickson 1985b:figs. 4, 21; McDonald 1979:516, 519; see also Smith and Young 1983:fig. 3). It is characterized by Red-Slipped Ware, Sarab Linear Painted Ware, and Black-Slipped Ware (McDonald 1979:197–202, tables 5–6; Levine and Young 1987:fig. 1, lower).

Late Sarab is linked by technology and form with the Red-Burnished Ware phase in Hulailan (McDonald 1979:138–39, 173–87, 195–204 with refs., figs. 13, 14s–x). Sarab Linear Painted Ware, with red- or black-painted chevrons, zigzags, and crosshatching, is part of a horizon style present throughout the Zagros. It is documented at Zagros Group sites such as upper ceramic Jarmo, Operation II:3–1 (McDonald 1979:198; Adams 1983:fig. 105:1–3, 107), at Zagheh in the Archaic period (Malek Shahmirzadi 1977b:pl. XII; Levine and McDonald 1977:pl. Ia), at Hajji Firuz period sites in Azerbaijan (Voigt 1983:161–63, 168 with refs.). The use of black and white pigments and specific linear motifs links Late Sarab with the Sefid period in Deh Luran (Hole 1977:112; compare Hole 1977:fig. 43s; McDonald 1979:pl. V:1, bottom).

C. *The Early Chalcolithic (J Ware) period* is defined by the earliest excavated deposits in Chogha Maran Operation 3:306 and by Tepe Siahbid Operation 2:206 to 203 (E. Henrickson 1985b: fig. 21). At Siahbid, J Ware is stratified above Late Sarab material and below an eroded level dated to Early Siahbid; at Maran, it also underlies Early Siahbid material (E. Henrickson 1983:305–16, 479–80, 1985b:figs. 4–5). J Ware has red, black, or white paint on a plain buff or red- and/or black-slipped surface, creating a bichrome or polychrome effect (E. Henrickson 1983:330–32, tables 44–45, figs. 97–99; 1985b:69, fig. 6 poorly reproduced; Levine and McDonald 1977:42, pl. Ib, fig. 1). It is similar in fabric, vessel form, and decorative style to lowland Halaf pottery; however, the design repertoire on J Ware is more limited, and complex Halaf motifs do not occur. The closest Halaf assemblage is that from Banahilk in Iraq, which apparently dates to the end of the Halaf period (E. Henrickson 1985b:69; Watson 1983a:233–34, 238, 1983b:figs. 197–200). To the south of the Mahidasht, J Ware occurs on the surface of sites in Hulailan, and perhaps in the Kuh-i Dasht (E. Henrickson 1986:89–90). It does not occur in the valleys to the north and east of the Mahidasht, and E. Henrickson has raised the possibility that J Ware may be partially contemporary with early Dalma occupations in these regions (1985b:101).

D. *The Middle Chalcolithic period* is divided into three phases.

1. *The Siahbid phase* is known from Tepe Siahbid and Chogha Maran. The deposit at Siahbid has been separated into two chronological units on the basis of stratigraphy and the occurrence of minor wares in the ceramic industry; a statistical analysis of motifs supports this division (see E. Henrickson 1985b:93–94, fig. 22). Early Siahbid is defined by Operation 2:202–201 at Siahbid and Maran Operation 3:305–304; Late Siahbid is defined by Siahbid Operation 1:102–101 (E. Henrickson 1983:481–88, 1985b:93–94, fig. 21).

At Chogha Maran, diagnostic Early Siahbid phase Black-on-Buff Ware is accompanied by Dalma "Ubaid" Painted Ware identical to sherds found in Dalma contexts in Kangavar (E. Henrickson 1983:333, 337–38, tables 46–47, 50, 58, figs. 101–3, 106; 1985b:figs. 12–15; see also "Godin"). A small quantity of Dalma Impressed Ware, again duplicated at Dalma period sites in Kangavar, occurs during the Early Siahbid phase but is absent from Late Siahbid deposits (E. Henrickson 1983:338–40, figs. 104–5, tables 51–52; 1985b:73, figs. 4–5, 9). By extension from Dalma parallels, Early Siahbid is contemporary with Ubaid 3 in Mesopotamia (see "Hasanlu").

Chronological placement of the Late Siahbid phase is based primarily on a computerized quantitative analysis of style, ALSCAL A, which indicates a strong relationship between Late Siahbid pottery from Siahbid and Maran phase pottery from Chogha Maran (for ALSCAL, see E. Henrickson 1985b:88, 1986 with refs.). The distribution of wares as well as stylistic evidence indicates that this pattern is most plausibly interpreted as the result of the continuation of a tradition in successive phases (E. Henrickson 1985b:74). The distance between them in time is not known, but a substantial gap may be indicated by the fact that ALSCAL A shows no stylistic relationship between Late Siahbid and Tell Madhhur in the Hamrin, a site strongly linked to the Maran phase by both ALSCAL A and ware comparisons (E. Henrickson 1985b:94, but see also p. 73). Late Siahbid is not linked stylistically to the Seh Gabi phase in Kangavar (E. Henrickson 1985b:93–94), nor is it similar to Pisdeli pottery from Azerbaijan (Voigt, in prep.). In the end, therefore, the chronological placement of Late Siahbid rests on indirect rather than direct evidence (see also E. Henrickson 1983:486–87).

2. *The Maran phase* is defined at Chogha Maran in Operation 1:levels 116–105 and Operation 3:levels 303–302 (E. Henrickson 1985b:fig. 21). Characteristic are Red-White-and-Black Ware, with a reddish-buff fabric covered with a thin white wash and decorated with a gray-black paint (E. Henrickson 1983:340–42, tables 53, 58, figs. 107–10; 1985b:figs. 18–19); and "Black-on-Red Ware," with black paint on a plum slip (E. Henrickson 1983:344–45, fig. 111, table 55; 1985a; 1985b:74, fig. 20).

Two of these ceramic types are widely distributed in western Iran and thus provide important evidence for relative chronology. "Black-on-Red Ware" is identified with pottery referred to here as "Black-on-Plum Ware," found in excavated contexts at Hakalan and Parchinah in Luristan, and in Susa A contexts in Khuzistan (E. Henrickson 1985b:74, 95–96, tables 2–5; see also "Western Luristan" and "Western Susiana"). E. Henrickson (1985b:95, table 5) also assigns sherds from Madhhur and Tell ʿUqair to Black-on-Red/Plum Ware, but these seem to be different in form and decoration from any of the published examples from Iran. Sherds that match the description of Red-White-and-Black Ware are characteristic of most of the deposit at Pisdeli Tepe in northwest Iran (Voigt, in prep.). Related material has been identified to the south in Luristan at Hakalan and Parchinah, and in survey collections (E. Henrickson 1985b:tables 2, 4).

A rare type in the Maran phase, Black-on-Buff Painted-and-Incised Ware, occurs at Tell Madhhur and other late Ubaid assemblages in the Hamrin, and is probably imported (E. Henrickson 1983:345). An independent link to Madhhur is established by an ALSCAL A test which shows a close stylistic relationship between Madhhur and the Maran phase (E. Henrickson 1985b:94, fig. 22).

E. *The Late Chalcolithic (Deh Savar) period* is defined by excavations at Deh Savar Tepe and has been documented at additional sites through survey. The Deh Savar assemblage is said to contain both Godin VI plain wares and beveled-rim bowls, the diagnostic type for Godin Period VI/V (E. Henrickson 1985b:74; see below).

F. *The Bronze Age*, known from limited soundings and surface survey, has been divided into two broad phases.

1. *The Maran Red-Slip phase* is defined by Operation 1:levels 104–101 and Operation 3:level 301 at Chogha Maran (E. Henrickson 1983:313–14, figs. 76–77, table 37). There is a complete break between the plain Red-Slipped and Gray-Slipped Wares characteristic of these deposits and the pottery from the underlying Chalcolithic levels (E. Henrickson 1983:490, 1985b:73–74).

The Maran Red-Slip phase is most closely related to

Godin III:6. At Chogha Maran a dozen sherds of Godin III Painted Ware were found through excavation, one of which was identified as Godin III:6 (R. Henrickson 1984a:708). Ceramic parallels with Godin III:6 include "slosh-proof jars"; Red-Slipped pots with an everted rim; and Gray-Slipped "carinated cuplets," small bowls with a row of white-filled incisions at the carination (R. Henrickson 1984a:figs. 72:1–2, 4–7, 79:12, table 23). A chronological link to Mesopotamia is provided by a few of the almost two hundred sealings found at Maran; most were in "an unfamiliar, probably local style," but some have close parallels in Early Dynastic II–III contexts in the Sin temple at Khafajeh (H. Pittman, cited in R. Henrickson 1984a:709). This comparison suggests that the Maran Red-Slip phase may begin earlier than Godin III:6 (see "Godin"; R. Henrickson 1984a:709, fig. 173). Finally, this phase is linked to Susa IVA by bowls with impressed ridge decoration (R. Henrickson 1984a:724; Carter 1980:fig. 25:5–9; see also Stève and Gasche 1971:pls. 14:6, 12:30).

2. *The Godin III phase* in the Kermanshah region is known only from surface material (Levine 1976a:160). A comparison of the Kermanshah pottery with that from the type site suggests an occupation equivalent to Godin III:5 to III:2 (R. Henrickson 1984a:table 23, 1986b:table 2).

The Kangavar Region and Eastern Luristan: The Godin Sequence

The sequence for the Kangavar Valley 90 km east of Kermanshah has been documented by the Godin Project of the Royal Ontario Museum under the general direction of T. Cuyler Young, Jr. Area clearances as well as a deep sounding were carried out at the large mound of Godin Tepe between 1967 and 1973 (R. Henrickson 1984a; Weiss and Young 1975; Young 1969; Young and Levine 1974). To obtain a larger sample for the early periods, excavations were undertaken at a group of small mounds collectively known as Seh Gabi in 1971 and 1973, under the direction of Louis D. Levine (Hamlin 1974b; E. Henrickson 1983, 1985b; Levine 1972, 1975; Levine and Hamlin 1974; McDonald 1979; Young and Levine 1974; Young and Weiss 1974:fig. 1). Surface surveys were carried out in 1961, 1965, and 1974 (Young 1966, 1975a, 1975b).

Adjacent valleys to the south seem to contain archaeological material closely related to that in Kangavar. The following research has therefore been incorporated into the discussion of the Kangavar sequence: excavations at Tepe Giyan carried out in 1931–32 by Georges Contenau and Roman Ghirshman (1935); a sounding at Tepe Abdul Hosein carried out in 1978 by Judith Pullar (1979); a deep sounding at Baba Jan carried out by Clare Goff (1968a, 1968b) in 1966 and 1967; a survey of the Malayer Plain in 1977 and 1978 by Rosalind Howell (1979); and soundings at Kunji Cave carried out by Frank Hole in 1963 and John Speth in 1969 (Speth 1971; Wright et al. 1975).

A. *The Early Neolithic (Abdul Hosein) period* is defined at Tepe Abdul Hosein in the Khawa Valley (Pullar 1979). The earliest occupation consists of features cut into virgin soil; this is succeeded by levels containing the remains of mud architecture. The chipped stone industry is said to be generally similar to that from Ganj Dareh and Asiab; it differs from that of Sarab in that the tools are smaller and better made (Pullar 1979:154). In a recent synthesis, Smith and Young have suggested that the aceramic levels at Abdul Hosein are contemporary with Zagros Ceramic Neolithic sites such as Jarmo, Sarab, and Guran (Smith and Young 1983:148); however, the basis for this statement is not clear, and both the excavator's relative dating and a large suite of radiocarbon dates suggest that Abdul Hosein is more likely to be contemporary with Ganj Dareh (see "Mahi Dasht"; McDonald 1979: 512).

B. *The Middle to Late Neolithic (Sarab) period* is known from surface survey in the Malayer Plain, where White-on-Black Ware like that found in the Mahidasht Late Sarab phase has been reported (Howell 1979:157). In Kangavar, a small number of sherds including some identical to Sarab White-on-Black Ware from a tertiary deposit at Seh Gabi Mound C suggests the presence of a nearby buried site, perhaps a camp (McDonald 1979:404–5, 413, 496, 522; but see also Smith and Young 1983:150, n. 7).

C. *The Early Chalcolithic (Shanabad) period* is defined by Seh Gabi Mound C:levels 1–5 (McDonald 1979:317–52, figs. 24–29; Levine 1975:fig. 3; note that Shanabad has also been referred to as Godin XII and as Kangavar XI). Obtaining a relative date for this assemblage is difficult. The buff chaff-tempered pottery, sometimes decorated with rows of red or black triangles (Hamlin 1974b:275; Levine 1975:fig. 4; Levine and Hamlin 1974:212, pl. IIc; McDonald 1979:360–405, pls. X–XI, figs. 30–39), is technologically similar to pottery from Sarab; however, the chipped stone industries are "strikingly different," with Shanabad lacking the formal blade technology characteristic of Sarab (McDonald 1979: 410–18, 449–51). Shanabad is clearly later than Sarab, but its placement immediately prior to Godin X is based on a consistent set of radiocarbon dates rather than on stratigraphic position (see below, "Radiocarbon Evidence"). Shanabad pottery has been found at sites in Malayer (Howell 1979:157) and in the latest level at Tepe Abdul Hosein (one sherd; Levine and Young 1987, citing J. Pullar Humphries). There are "pre-Dalma" levels in Godin's Operation XYZ:spits 78–76 containing sherds described as "soft-ware," but little is known about this "Godin XI" assemblage (E. Henrickson 1983:478).

D. *The Middle Chalcolithic period* is divided into three phases based on the stratigraphic sequences at Godin Tepe and at Seh Gabi Mound B (Levine and Young 1987).

1. *The Godin X (Dalma) phase* is defined by spits 63–50 in Operation XYZ at Godin Tepe (E. Henrickson 1983:170–72, fig. 37; Young and Weiss 1974:210) and the lower part of the deposit at Seh Gabi Mound B (levels 5–7; Hamlin 1974b:275; E. Henrickson 1983:158–61; Young and Levine 1974:2–4). This phase is characterized by a series of unusual ceramic types: Dalma Painted, which includes Monochrome and rare Bichrome; Dalma Impressed Ware; and Dalma Double-Slipped Ware (E. Henrickson 1983:196–203, figs. 50–51, 55–64, tables 34–35; 1985b:69, figs. 7–8; Young and Levine 1974:3–4, figs. 9–10). Present in smaller quantities are Black-on-Buff and Dalma "Ubaid" Painted Ware (E. Henrickson 1983:203–6, tables 34–35; 1985b:69, fig. 10).

Although the ceramic samples from each 20-cm deep arbitrary level or spit in the 6–8 m^2 area of Godin Operation XYZ are small, they can be used to subdivide the period into three subphases that are potentially useful for chronology (E. Henrickson 1983:173–74, fig. 37). Early Dalma has a high frequency of Dalma Streaky Ware. Dalma Monochrome with simple linear decoration slowly increases and is characteristic of Middle Dalma. Dalma Impressed Ware appears near the end of Middle Dalma and increases significantly during Late Dalma. The Seh Gabi Dalma occupation appears to cover a much smaller period of time, probably contemporary with Middle or Late Dalma at Godin (E. Henrickson 1983:174, figs. 38–39).

The Kangavar Dalma assemblage is very similar to that at the type site in Azerbaijan (E. Henrickson 1985b:101; see also "Hasanlu"). Dalma pottery has been recovered from Tepe Giyan, and through surface survey in the Nehavand, Khawa, and Kakavandi Valleys to the south, but not from Malayer (E. Henrickson 1985b:tables 1, 4; see also Goff 1971:134, figs. 2:23–28, 3:32–45). To the west, Dalma Impressed Ware links Middle and/or Late Dalma with the Early Siahbid phase in the Mahidasht (q.v.). Sherds of "Dalma-like Impressed Ware," interpreted by E. Henrickson as local copies, are found at Ubaid sites such as Abada and Kheit Qasim in the Hamrin and Yorgan Tepe near Kirkuk (E. Henrickson 1986) and in a Bayat context in Deh Luran (Wright 1981:fig. 10 d–e).

Sherds from Abada I/II, identified as Dalma Painted Ware (Oates 1983:253; Yasim 1983:181), are significantly different from Kangavar Dalma pottery (E. Henrickson and L. D. Levine, pers. comm. 1985). Nevertheless, Henrickson's ALSCAL analysis found that the designs on Dalma painted wares from Seh Gabi B level 7 are "fairly close" to those of Ubaid 3 Gawra XIX–XVII (E. Henrickson 1983:667–68, figs. 131–32), a correlation supported by the presence at Dalma Tepe of sherds at home in Gawra XVI (see "Hasanlu"; Porada et al., this vol., chap. 5).

2. *The Godin IX (Seh Gabi) phase* is defined by Godin Tepe Operation XYZ:spits 48–42 (Young and Weiss 1974:210; E. Henrickson 1983:172), and Seh Gabi Mound B:levels 2–4 (Young and Levine 1974:figs. 4–6, levels A1–B; E. Henrickson 1983:161–69). Seh Gabi Painted Ware, with a shiny black vitrified paint on a mat oxidized surface (E. Henrickson 1983:203, 204, figs. 65–71, tables 27–28, 32; Young and Levine 1974:fig. 11), occurs at Giyan and at sites in the Malayer Plain (E. Henrickson 1983:494–95, table 65; 1985b:table 1, 4; Howell 1979:157). This period is technologically and stylistically isolated from sites in the nearby Mahidasht (see "Mahidasht"). There are, however, stylistic similarities between Seh Gabi Painted and Pisdeli Painted Ware recovered from Hajji Firuz Tepe Trench F10, dated to the middle of the Pisdeli period and contemporary with Gawra XIII (see "Hasanlu"; E. Henrickson 1983:484–85). Seh Gabi Red-Slipped Ware (E. Henrickson 1983:187–90, figs. 37, 39–43, tables 34–35; Young and Levine 1974:fig. 12) is comparable in form and fabric to Pisdeli Red-Slipped and Burnished Ware (Voigt, in prep.).

3. *The Godin VIII (Teherabad) phase* is defined by Godin Operation XYZ:spits 40–29 (E. Henrickson 1983:174–75, fig. 37). Pottery related to Godin VIII from the surface of Seh Gabi B may have originated from an eroded deposit (E. Henrickson 1983:175, 205). The predominant ceramic group is Seh Gabi Red-Slipped Ware, accompanied by a Black-on-Buff Ware that is very different from the Seh Gabi Painted Ware stratified below it in Operation XYZ (E. Henrickson 1983:174–75, 204–5, table 27).

Comparisons with material from the Mahidasht are very general and link Godin VIII with the Black-on-Buff Ware found in earlier, Middle Chalcolithic contexts at Tepe Siahbid and Chogha Maran (E. Henrickson 1985b:70). Because Godin IX is correlated with the Late Siahbid phase, E. Henrickson places Godin VIII contemporary with the Maran phase in the Mahidasht (1985b:fig. 21). This dating is supported by similarities in form and some painted designs between sherds from late Godin VIII and the late Pisdeli period (Voigt, in prep.). Relative to the Mesopotamian sequence, both the comparison with Maran and with late Pisdeli indicate a correlation of Godin VIII with the end of Ubaid and the beginning of Uruk.

E. The *Late Chalcolithic period* is divided into three phases that are stratigraphically related at Godin Tepe.

i. *The Godin VII (Hoseinabad) phase* is defined by Operation XYZ:spits 26–13 and Operation B:levels 49–35 at Godin (Young 1969:3, fig. 5; Young and Levine

1974:17), and Seh Gabi Mounds A, E:levels 3–4, and F (E. Henrickson 1983:172; Young and Levine 1974:13–15). The ceramic industry includes highly distinctive S-shaped jars and squat concave-based vessels with finger-impressed handles (E. Henrickson, pers. comm. 1984; Levine and Young, 1987:fig. 16; Young 1969:fig. 6; Young and Levine 1974:fig. 13). Godin VII pottery is apparently not present in the Mahidasht (Levine and Young 1987), but has been found at sites to the east including Malayer (Howell 1979:157), and Avaj in the pass to the east of the Hamadan Plain, as well as to the south at Tepe Giyan and sites in Harsin (L. D. Levine, pers. comm.). Farther east, there are excellent parallels between Godin VII and Ghabristan I (see "Qazvin/Kashan"). These include jars with molded decoration on the rim (Young 1969:fig. 6:3; Young and Levine 1974:fig. 13:1–5, 7; Majidzadeh 1977:pls. 79:1–4, 80:3) that are virtually identical in fabric as well as style to the Godin vessels (Dyson and Voigt, observation).

Stamp seals found in Godin VII contexts at Seh Gabi have good parallels in other regions (see Hamlin 1974b:276 top right; unpublished drawings and information on context from E. Henrickson, 1985). Two seals, one hemispherical and a second with a pierced tang, have an incised design with chevrons filling the area between the arms of a central cross that is duplicated on a tanged seal from Sialk III$_1$ (Ghirshman 1938:pl. LXXXVI:S417), and on a seal and a sealing from Gawra XI (Tobler 1950:pls. LXXXVIII:4, CLIX:20–21). The same design occurs on an ovoid hemispherical seal pierced longitudinally; this seal form also occurs in Gawra XI and "before XII" (Tobler 1950:pl. CLIX:26, 28). A second design with straight lines filling each quadrant occurs on a seal with a tang tentatively assigned to Godin VII. It is duplicated on a seal from Sialk III$_5$ (Ghirshman 1938:pl. LXXXVI:S117); a second Sialk example from III$_4$ is slightly smaller and has a proportionately larger tang (Ghirshman 1938:pl. LXXXVI: S.259). A round-faced hemispherical seal with schematic figures may be related to seals of the same form, with animals and linear fill found in Gawra XII (Tobler 1950:CLXVII:139) and in Susa A at Jaffarabad (Dollfus 1971:fig. 23:5).

2. *The Godin VI (Cheshmeh Nush) phase* is defined by Godin Operation XYZ spits 12–5, a single building level; Operation B strata 34–19; the Brick Kiln Cut; and Seh Gabi Mound E levels 2–1 as well as tests in Mounds F and G (E. Henrickson 1983:172; Levine and Hamlin 1974:211; Young 1969:4; Young and Levine 1974:17; Young and Weiss 1974:210). The largest exposed area at Godin comes from the Brick Kiln Cut on the lower slopes of the Citadel, where 5 phases of architecture rest on virgin soil (Young and Weiss 1974:210–11).

Characteristic of Godin VI is Buff Fine Ware, sometimes white-slipped and/or decorated with fine incisions or painted designs (E. Henrickson, pers. comm. 1984; Levine and Young 1987:fig. 17; Young 1969:5, fig. 7; Young and Levine 1974:fig. 14). The Godin VI ceramic assemblage is found at sites in Malayer (Howell 1979:157), in Baba Jan V (Goff 1971:145, fig. 7; 1976:pl. VIII:c–d), and at Tepe Giyan (E. Henrickson 1985b:table 1; L. D. Levine, pers. comm. 1985). Painted Ware and some vessel forms from Kunji Cave are said to be most similar to the latest Godin VI levels in Operation B (Wright et al. 1975:132–33, fig. 6). Farther east, vessels identical to VI Painted Ware were found in Ghabristan IV, levels 6–4 (Majidzadeh 1977:pls. 95–96, 1978:fig. 3:8), with a smaller number of parallels to Ghabristan II (e.g., Majidzadeh 1977:pl. 91:2, and Young 1969:fig. 7:1; Majidzadeh 1977:pl. 89:1, and Young 1969:fig. 7:10; Majidzadeh 1977:pl. 84; E. Henrickson, pers. comm.). Godin VI plain wares are also present at Ghabristan (Levine and Young, pers. comm.), suggesting a relatively close relationship between these settlements. Some of the same forms and designs are found at Tepe Sialk in Period III$_{3-7}$, with the majority in Sialk III$_{6-7}$ (E. Henrickson 1985b:74, pers. comm. 1985; Majidzadeh 1978).

Bowls with punctate decoration identical to Godin VI Buff Fine Ware have been found as far north as Bukan (Swiny 1975:82, fig. 1:11–14; unpublished collections in the University Museum). To the west and south, plain wares with fabric and vessel forms related to Godin VI occur in the Mahidasht (E. Henrickson 1985b:74) and a few sherds of Painted Ware were also found in the sounding at Deh Savar (Levine and Young 1987). Plain wares occur to the south in Hulailan, and in Deh Luran at Sargarab and Farukhabad, the latter in Early Uruk contexts (see "Western Luristan" and "Deh Luran"). A second tie to the Uruk period is provided by a stamp seal impression from a Godin VI context at Seh Gabi E (Hamlin 1974b:276) that shows a squatting human. The pointed head and posture of this figure are found on a seal impression from Susa assigned to period II (Amiet 1972:38, 44, pl. 3:239); related to the Susa example is a sealing from the Uruk pit at Sharafabad, suggesting a date within Middle Uruk for the entire group (Wright, Miller, and Redding 1980:fig. 6:3).

3. *The Godin VI/V (Late Uruk) phase* has been defined in the Godin Tepe Deep Sounding, with additional material from Operation B:17–11, XYZ:4–0, the Brick Kiln Cut, and small tests (E. Henrickson 1983:172; Weiss and Young 1975; Young 1969:6–7, figs. 4–5; Young and Levine 1974:17; Young and Weiss 1974:208–11). Near the end of Godin VI, an oval-walled compound containing a series of small buildings around a court was built at the top of the citadel (Weiss and Young 1975:fig. 2). Within the oval compound, about a third of the pottery recovered

is characteristic of Godin VI as described above, but the rest is "exotic," related to lowland Late Uruk (Young and Weiss 1974:209; Weiss and Young 1975:5–6); elsewhere on the mound the only Late Uruk types associated with VI pottery are beveled-rim bowls and trays (Levine and Young 1987). Although the compound had been used to establish a separate period, it is now apparent that Godin V consists of an architectural unit and some diagnostic ceramic types within a typical Godin VI occupation (Levine and Young 1987). To emphasize the continuity of the Godin VI assemblage within the settlement as a whole and still recognize a significant historical event, this short phase has been renamed "Godin VI/V."

Lowland parallels for the pottery of VI/V include four-lugged pots with rope appliqué on the shoulder from Warka Eanna IV, Nippur Inanna XIX, and later, and Susa Acropole I:17 (Weiss and Young 1975:6, n. 6, fig. 3:1, 2a with refs.; Le Brun 1978c:fig. 34); four-lugged pots with incised shoulder triangles from Warka Eanna IV, Nippur Inanna XVI, and Susa Acropole I:17a (Weiss and Young 1975:6, n. 7, fig. 3:1a); red-slipped vessels with nose lugs and bands of black paint from Susa Acropole I:17 and Middle Uruk Farukhabad (Weiss and Young 1975:6, n. 8, fig. 3:2; see also Wright 1981:fig. 57:a); and beveled-rim bowls from Warka Eanna IV, Susa Acropole I:17–16, and Early to Late Uruk contexts at Farukhabad (Weiss and Young 1975:fig. 3:3–5; Wright 1981:128–29). Also recovered were droopy spouts, rolled-rim jars, and trays paralleled in Susa Acropole I:17 and 16 (Levine and Young 1987:fig. 22:2–5; Le Brun 1971:fig. 52, 1978c:fig. 36), as well as bowl forms characteristic of Susa Acropole I:17 (V. Badler, pers. comm.; see Le Brun 1971:fig. 46:17). Missing at Godin are ceramic types characteristic only of Proto-Elamite sites such as Susa Acropole I:16–14C and Jemdet Nasr sites in Mesopotamia (Weiss and Young 1975:6, nn. 9–10).

Clay tablets, which bore numerical signs or in one case a pictograph and numbers, are paralleled in Susa Acropole I:17 (Weiss and Young 1975:11, figs. 4, 5:1–2, 4–5; Amiet 1972: nos. 602, 604, 629, 657; Le Brun 1971: fig. 44.8; see also Le Brun 1978a). The seals and seal impressions also find parallels in Acropole I:17 as well as in Warka V–IV (compare Weiss and Young 1975:fig. 5:8, with Le Brun 1971:fig. 44:5; see also Le Brun 1978a). Thus ceramic, epigraphic, and glyptic evidence all points toward a correlation with Susa Acropole I:17.

Beveled-rim bowls document contemporary settlements during the Deh Savar period in the Mahidasht (Levine and Young 1987), at Tepe Giyan (L. D. Levine, pers. comm. 1985), and in Malayer (Howell 1979:157). They are associated with Godin VI pottery in Ghabristan IV:levels 3–1 (Majidzadeh 1981:146, 1977:pl. 96), and at Sharak in the Bakhtiari Mountains (Zagarell 1982:figs. 23–25). There are also ceramic parallels between Godin VI/V and Sialk IV (see "Qazvin/Kashan") and Early and Middle Banesh in Fars (W. Sumner, pers. comm.).

F. *The Godin IV (Yanik) period* is defined at Godin Tepe in the Deep Sounding, with additional material from the Brick Kiln Cut and Operations A:28–31, B:10–3, F:10–1, and small tests around the perimeter of the mound (Young 1969:9; Young and Levine 1974:fig. 17). There seems to have been a hiatus between Godin VI/V and IV, but the excavators think it was probably brief (Weiss and Young 1975:2).

The diagnostic ceramic group is Gray-Black Burnished Ware, which is sometimes decorated with small angular motifs that have been excised and filled with white paste (Young 1969:fig. 11; Young and Levine 1974:fig. 19:1–6). As the name of the period implies, closely related pottery was first excavated in the Early Bronze Age I deposit at Yanik Tepe in Azerbaijan (see "Northwestern Iran"; Young 1969:10); the characteristic round buildings of Yanik Early Bronze I are not, however, found at Godin. Related assemblages occur in the following regions to the east and north of Kangavar, providing a more or less continuous distribution between Godin and Yanik: Malayer (Howell 1979:157); the Hamadan Plain (Young 1966:232, 235); and the Bijar and Mianduab areas (Swiney 1975:82–83, fig. 5). At least one site is known on the Qazvin Plain 1 km southwest of Sagzabad (E. Negahban, pers. comm.).

White-Filled Black-Burnished Ware has also been recovered from sites to the south, usually in quantities suggesting imports rather than settlements. Several sherds have been picked up at Tepe Giyan (L. Levine, pers. comm.), and Goff (1966:82–83) reports a stratum of this material underlying sherds of "Susa D type" at Chia Zand in the Pusht-i Kuh. A sherd of the excised type occurs in the Susa D sherd collection of the Musée des Antiquités Nationales, St. Germain (Dyson 1973a:698, n. 7). Finally, two sealings now assigned to Godin IV are paralleled in the "late Proto-Literate or ED I" period in Mesopotamia (R. Henrickson 1984a:724, n. 4, citing E. Forte; Young and Levine 1974:fig. 34:3).

G. *The Godin III period* is defined by stratified building remains in the Deep Sounding, with additional material from numerous small trenches (R. Henrickson 1984a:tables 4–5, fig. 3). The original description (Young 1969:11–23; Young and Levine 1974:18–29) has been superseded by R. Henrickson (1984a, 1984b, 1986b, 1987). In Henrickson's study the earlier published levels are modified, so Young and Levine's levels "III_{5-7}" are all now subsumed under III:6 (R. Henrickson 1984a:103). The sequence has seven stratigraphic units labeled as levels III:6 to III:2, Post-III:2, and III:1, each characterized by a ceramic assemblage with distinctive vessel forms and painted style (R. Henrickson 1984a:5–7). Only levels III:6 to III:4 date before 2000 B.C. and are relevant here. This sequence provides for the first time a relatively well-documented description of the time range formerly represented in this area by Tepes Giyan, Jamshidi, and Bad Hora; it replaces former attempts to define a sequence from this inadequately documented material (Dyson 1965, 1973a; R. Henrickson 1984a:746–824, fig. 173, table 17–35, with refs.).

1. *The Godin III:6 phase* has a series of architectural sublevels (R. Henrickson 1984a:114–94, figs. 7–18, 37–39); but although the stratigraphy indicates a long duration for Godin III:6, the pottery is "quite homogeneous" (R. Henrickson 1984a:387). Painted Buff Ware includes restricted, carinated vessels and ovoid jars with ridges at the neck and a design zone at the shoulder (R. Henrickson 1984a:388–92, figs. 46–90). Motifs in the main register include bull's-eyes, nested triangles, lozenges, "shark's teeth" or "flames," abstract birds' wings, "tufts," animals, and arcs with pendant lines (R. Henrickson 1986b:figs. 4–5). Rare (Burnished) Gray-Black Ware may represent a continuation of the Godin IV ceramic tradition (R. Henrickson 1986b:fig. 6:4–7, 9–10; pers. comm. 1985).

In the Mahidasht, Godin III:6 is contemporary with the Maran Red-Slip Phase, correlated through glyptic evidence with Early Dynastic II–III in Mesopotamia (see "Mahidasht"). At al-Hiba in southern Iraq, sherds comparable to Godin III:6 Painted Buff Ware were associated with sealings and tablets dated to late Early Dynastic III (R. Henrickson 1984a:707, n. 2, with refs.).

There are numerous parallels between Godin III:6 and material from recent excavations at Susa assigned to period IVA (Ville Royale I:9–13; R. Henrickson 1984a:table 33, 1986b:table 2). In addition to imported sherds of Godin III:6 Painted Buff Ware (see "Western Susiana"), parallels include bowl forms (R. Henrickson 1984a:figs. 80:5–6, 81:19, 82–84; Carter 1980:figs. 15:7–8, 11, 25:1–3, 10); large pithoi with cable decoration (R. Henrickson 1984a:figs. 65–68; Carter 1980:figs. 24:1, 26:2, 27:2); "pie-crust" bases (R. Henrickson 1984a:figs. 65, 67–68; Carter 1980:fig. 27, 3–4, 5–7); and ovoid jars with ridges (R. Henrickson 1984a:figs. 59–62; Stève and Gasche 1971:figs. 17:1, 5, 18:15–16, 22:1–2, 4). Vessels from some of the Pusht-i Kuh tombs dated to Early Bronze I are comparable in shape and painted design to Godin III:6 pottery (R. Henrickson 1984a:table 30, 1986b:table 2). Both Susa IVA and Pusht-i Kuh Early Bronze I have been independently correlated with Early Dynastic III and the early Akkadian period (see "Western Susiana" and "Western Luristan").

2. *The Godin III:5 phase* appears to have developed from III:6, but the two phases are sufficiently distinct stylistically to suggest a short hiatus between them (R. Henrickson 1984a:417, 847). Godin III:5 at Godin Tepe represents a short occupation, ending when the settlement was suddenly destroyed, perhaps by an earthquake (R. Henrickson 1984a:195–96). Large quantities of pottery were found in situ on the floors. Painted Buff Ware motifs include eagles, goats, waterfowl, nested diamonds, zigzags, vertical chains, the "sting-ray," and the lozenge (R. Henrickson 1984a:396–97, figs. 91–104; 1986b:figs. 8–10).

Exact ceramic parallels lie primarily in adjacent valleys along the High Road and in the south (R. Henrickson 1984a:878, fig. 179; 1984b:fig. 2). In the Khawa-Harsin area, Godin III:5 sites are known from surface survey (R. Henrickson 1986b:table 2 with refs.) and from excavated contexts at Tepe Giyan, formerly assigned to Early Giyan IV (Contenau and Ghirshman 1933; R. Henrickson 1986b:table 2). At Baba Jan, architectural remains in level 5 of the deep sounding on the Central Mound correspond to Godin III:5, as do two graves dug beneath the Painted Chamber on the East Mound (Goff 1976:21–26, figs. 1–4, 5b:1; R. Henrickson 1986b:table 2). Settlements related to Godin III:5 were also found at sites in the Mahidasht, Kamtarlan, and Chigha Sabz in the Rumishgan Valley (R. Henrickson 1986b:table 2). In Khuzistan, recent excavations at Susa found an imported III:5 sherd in deposits with monochrome painted wares (R. Henrickson 1984a:711, n. 6 on 724–25; Stève and Gasche 1971:pl. 16:12), assigned to Susa IVA by Carter (1978:table I; see also R. Henrickson 1986b:table 3).

A few parallels can be drawn with Hasanlu VII to the north, which is contemporary with Early Dynastic III and the Early Akkadian period (see "Hasanlu"). A globular jar of Painted Orange Ware from Hasanlu (Dyson 1967b:pl. 1483A) follows the stylistic canon of Godin III:5 as set forth by Henrickson, and a small carinated bowl in Unpainted Orange Ware (Dyson 1967b:fig. 1027, center) is paralleled in form by Red-Slipped Ware bowls from Godin III:5 (R. Henrickson 1984a:fig. 108:8–10).

To summarize, links to the Mesopotamian sequence via both the southern lowlands and the northern Zagros indicate that Godin III:5 is approximately contemporary with the Early Dynastic III to Akkadian periods. Since Godin III:6 is correlated with Early Dynastic IIIB, Godin III:5 should date to the Proto-Imperial/Akkadian period (R. Henrickson 1984a:710, fig. 173).

3. *The Godin III:4 phase* buildings were constructed while some III:5 wall stubs were still visible and could be used as foundations (R. Henrickson 1984a:209–50, figs. 22–26, 37–39, 41); it ended with burned debris and what seems to have been a general destruction (R. Henrickson 1984a:244). Carinated vessels continue as the major Painted Buff Ware form; ridges frequently appear at the carination on larger vessels, while on smaller vessels the carination may be reduced to a slight break in the shoulder curve. Painted designs executed with fine lines are predominantly geometric (R. Henrickson

1984a:404–7, figs. 110–21, 128, 130, 132; 1986b:figs. 11–13). New is a complex "sun" motif, and pairs of waterfowl with long beaks are common.

Closely related sites within the highlands are found in the same areas occupied in Godin III:5. At Tepe Giyan, material from "Classic Giyan IV" is considered contemporary with Godin III:4 as is Jamshidi IV (R. Henrickson 1986b:table 2, fig. 3). Survey sherds dated to III:4 have been found in the Mahidasht, Kuh-i Dasht, and Alishtar valleys; the southernmost occurrence is from an excavated context at Chigha Sabz in Rumishgan (R. Henrickson 1984b:fig. 3, 1986b:table 2).

Sherds of Burnished Gray Ware tentatively identified as imports (R. Henrickson 1984a:403) provide some evidence for the dating of Godin III:4 relative to the Mesopotamian sequence. Fragments of a fenestrated base decorated with a band of incised or impressed bull's-eyes bordered by a series of fine bands (R. Henrickson 1986b:fig. 13:14) find a close parallel in a Gray Ware vessel from a "Gutium-Ur III?" context at Tell Asmar in the Diyala; related sherds are of Larsa date (Delougaz 1952:pl. 123c). A second Godin III:4 sherd has an incised design tentatively identified as a bird, another popular motif in the Larsa period (R. Henrickson 1986b:fig. 13:16; Delougaz 1952:pl. 124a–a′, 125c). A Gray Ware bowl decorated with a band of concentric circles and incised bands, together with the fenestrated base mentioned above, may imitate the "late group" of chlorite bowls at Susa (Miroschedji 1973:26–79), dated to Susa VB and contemporary with Isin-Larsa (see "Western Susiana"). Since most of the Godin III:4 Gray Ware was found in tertiary contexts and therefore provides a *terminus post quem*, it can be argued that this level is contemporary with or later than Isin-Larsa.

Internal dating for this phase provides chronological boundaries. Godin III:5 is dated to the Akkadian period (see above). Following the destruction of III:4, there is a hiatus; Godin III:3 is represented only by pits and architectural fragments, which were then filled and leveled for phase III:2 construction, and is of indeterminate duration. Godin III:2 is dated by parallels that generally date to the late Larsa and Old Babylonian periods (R. Henrickson 1984a:712–18,fig. 173). Thus the correlation of III:4 with Isin-Larsa, and perhaps Ur III, is upheld (R. Henrickson 1986b:fig. 3).

Radiocarbon Evidence for West Central Iran

All of the dates for the Neolithic are beyond the range of the CRD tables and are quoted here with the 5730 half-life. Absolute dates for the Early Neolithic have been obtained from Ganj Dareh and Abdul Hosein. The determinations from Ganj Dareh are inconsistent but suggest that the occupation begins by ca. 7000 and had a duration of several hundred years (table 2). This conforms with the single date from Aceramic Guran. However, the determinations from Abdul Hosein are stratigraphically inverted—two of three samples from "just above virgin soil" dating to ca. 7000, while two of three from overlying deposits dated to ca. 7250 B.C. (table 2). Dates for Zagros Standard ceramic assemblages at Sarab and Guran indicate that they were well established by ca. 6000 B.C.

All other dates lie within the range of the CRD tables. The Early Chalcolithic Shanabad phase has three dates, suggesting that this unique assemblage dates ca. 5000 B.C. (table 2). The next cluster of five dates comes from late(?) Godin IX, the Seh Gabi phase, with a corrected average range of 4160–3905 B.C. (table 1). This range seems too late for two reasons. First, it would place Godin IX contemporary with Susa A, which is incompatible with a network of relative dates documented for the Middle Chalcolithic in the Mahidasht and Kangavar (see "Mahidasht" and "Godin"). Second, an average date for the middle of the Pisdeli period, which provides the only direct artifact parallels for Godin IX (see "Hasanlu"), ranges 4540–4405 B.C. A comparison of individual dates shows that a single date for the early part of Godin IX (SI-4913) overlaps with the Pisdeli range.

The only other large group of dates for this region comes from Godin VI/V. Reasonably consistent, the group has a corrected average range of 3190–2960 B.C. (tables 1–2). This again seems too late since artifact parallels suggest that Malyan Middle Banesh should be later than Godin VI/V; however, a large cluster of dates places Middle Banesh within the range 3370–3050 B.C. Removing the two dates at Godin which appear to be possibly from intrusive samples (SI 2674 and SI 2675) (see Dyson 1987) would leave an average of the remaining five in the same range as the average for Middle Banesh. This is probably closer to reality but still does not resolve the descrepancy with the artifact parallels. Possibly confirming what may be a late bias within the Godin series, two consistent dates for Godin IV ca. 2400 B.C. are significantly later than the culturally related assemblage from Yanik Tepe Early Bronze I dated near the beginning of the third millennium by a cluster of four samples (table 2).

Central Northern Iran

The Qazvin/Kashan Sequence

The Qazvin Plain lies at the western end of a strip of agricultural land that stretches eastward along the foot of the Elburz Mountains from Azerbaijan to Khorasan; along this strip runs the continuation of the High Road. Kashan, one of a series of oasis cities along the western edge of the Dasht-i Kavir, also lies on a major trade route running from Qazvin in the northwest to Kirman in the southeast. The Qazvin Plain Project of the University of Tehran carried out systematic research from 1970 to 1978 under the direction of Ezat O. Negahban (1981). Survey of the plain was combined with excavations at the sites of Zagheh (Negahban 1973, 1977, 1979, 1984; Malek Shahmirzadi 1977b, 1979b), Ghabristan (Negahban 1973, 1977; Majidzadeh 1976, 1977, 1978, 1979, 1981), and Sagzabad (Negahban 1973, 1974a, 1974b, 1976, 1977; Malek Shahmirzadi 1977a, 1979a). The resulting sequence extends and partly replaces that from Tepe Sialk, excavated in 1933–37 by Roman Ghirshman (1938) for the French Archaeological Mission in Iran.

The earliest periods are documented at Zagheh, in very limited tests taken to virgin soil (FX: Malek Shahmirzadi 1977b:52; Negahban 1973:6, 1974a:216; TTFGX, Malek Shahmirzadi 1977b:55, 65–66, 84, chart I, map 9). Other excavations include an area of over 1,000 m^2, sometimes referred to as "the Village" (Malek Shahmirzadi 1977b:97–115, chart IV, figs. 8–45; 1979), and an area of ca. 600 m^2 to the north of the Village Trench which contained the "Painted Building" (Malek Shahmirzadi 1979b:191–92, map 2; Negahban 1979). Malek Shahmirzadi used his excavations in the deep sounding FGX and the Village Trench to construct an overall sequence for the site (Malek Shahmirzadi 1977b:chart I): Zagheh levels IX–XIII are assigned to the Archaic period and Zagheh VIII–I to the Cheshmeh Ali period, based on the presence of Cheshmeh Ali Ware (Malek Shahmirzadi 1977b:table 8). This phasing, which involves the correlation of distant probes based on absolute depth, is not accepted by Negahban; based on his own excavations he would assign only levels III–I to the Cheshmeh Ali period, and level IV and below to the Archaic (Negahban 1979, 1981:9–10). The critical issue for chronology is not just the assignment of individual stratigraphic units to a specific time unit, but a determination of the total depth of the Zagheh Archaic deposit and thus some estimate of its duration. While the Malek Shahmirzadi sequence cannot be accepted for the site as a whole without serious reservations, it is used here because it is the only published account of Zagheh with named stratigraphic units and associated ceramic types.

The middle portion of the Qazvin sequence is known from Ghabristan, the western portion of the mound of Sagzabad (Negahban 1973:5, Plan VI). The sequence, which does not overlap with that from Zagheh, is based primarily on Trench A/AEE (Majidzadeh 1977:45–46). In using the preliminary reports for this site, note that the numbering system for the major occupation phases has been reversed: in early reports (Negahban 1973, 1974a, 1974b; Majidzadeh 1977) periods are numbered I to IV from the top down; in later reports Majidzadeh has switched the order; so Ghabristan I is the earliest period and IV the latest (Majidzadeh 1976, 1978, 1979, 1981).

A. *The Zagheh period* is defined by TTGFX levels IX–VI, or Zagheh "phases" XII–IX (Malek Shahmirzadi 1977b:84–92, fig. 5, chart I; 1979:fig. 2). Characteristic of the Zagheh period are two types of chaff-tempered decorated wares: Crusted Ware, coated on the exterior with a thin layer of fine sand and highly burnished on the interior (Malek Shahmirzadi 1977b:286, pls. XIIA:8–9, XIIB:7, XIID:1–2); and Zagheh Archaic Painted Ware, with red geometric designs applied to a burnished red-to-buff chaff-tempered fabric. Common motifs in the Zagheh period are nested zigzags, crosshatched bands, diagonal lines with pendant loops, and hatched or crosshatched triangles (Malek Shahmirzadi 1977b:286, pl. XIIA–D). Very similar sherds were recovered from Sialk I_{1-2} (Ghirshman 1938:pl. XL). Parallels to the west are with Late Sarab Linear Ware found at Mahidasht sites (see "Mahidasht"; Levine and McDonald 1977:pl. Ia) and with painted pottery from Hajji Firuz in Azerbaijan (Voigt 1983:figs. 92–94, 97). More distant ties for this entire group can be found in painted Samarra and Hassuna pottery (Dyson 1965:236; Levine and McDonald 1977:44; Voigt 1983:163–68).

Parallels for clay figurines are more widely distributed in time, but conform to the spatial pattern found for ceramics. Thirty-nine female figurines from the Painted Building include realistic portrayals of pregnant, seated females with spread legs and stalklike upper bodies that are similar to figures throughout the Jarmo sequence and in the early Hassuna period at Telul eth-Thalathat (Negahban 1984:pls. II, III:a–b; Broman 1983:figs. 156:1–4, 7, 9, 157:3a–b; Fukai and Matsutani 1981:pls. 20:4, 21:1–2); and seated figures with heavy legs but no indication of pregnancy, similar to figures from Umm Dabaghiyah (Kirkbride 1972:pl. VII:2–3; Negahban 1984:pl. VI:a–b). More stylized seated forms with fingernail-impressed bodies resemble figures from the Surkh and Chogha Mami Transitional Phases at Chagha Sefid (Negahban 1984:pl. VII; Hole 1977:229, fig. 90d). Highly abstract "boot-shaped" or triangular objects with heavy fused legs tapering to a conical foot are nearly identical to figures from aceramic Neolithic deposits at Gritille on the Euphrates (Negahban 1984:pls. VI:e, VII:g–h, VIII; Voigt, unpublished field data); a variant of this form occurs in Iblis I (Negahban 1984:pl. IX:a, f; Evett 1967: fig. 2).

B. *The Sialk I_{3-5} period* is not documented at Zagheh, but is defined by the upper six meters of the deposit in Trench I on the North Mound at Tepe Sialk (Ghirshman 1938:pls. XXXV–XXXVI). Painted designs include hatched motifs similar to those in the Archaic, with new elements such as stacked solid triangles, panels of thin horizontal lines bordered by large solid triangles, and net patterns. Particularly popular in I_{4-5} is a series of motifs that seems derived from basketry (Ghirshman 1938:pls. XXXVIII, XLI–XLIV).

There are good parallels for this period in the Mushki and Jari phases in Fars (see "Southwestern Iran"). Ties to the Deh Luran sequence are diverse, but form a consistent pattern: sling missiles (Ghirshman 1938:pl. LII:35) occur only in the Sefid and Surkh phases at Chagha Sefid; miniature mullers (Ghirshman 1938:pl. LII:37–39) occur from Mohammad Jaffar to Surkh, with a large group in the Sefid phase (Hole 1977:fig. 87e–h, table 74). Although somewhat vague, stylistic similarities occur between Sefid Red-on-Cream Ware and sherds from Sialk I_3 with boldly painted designs (Ghirshman 1938:pls. XXXIX:S1274, XLI–XLII; Hole 1977:fig. 43). To the east, Sialk I_{3-5} is linked to the Djeitun Phase at Sang-i Chakhmaq East (see "Damghan/Khorasan").

C. *The Cheshmeh Ali period* is defined at Zagheh by TTFGX V–0, and by large area clearances in the Village Trench; in Malek Shahmirzadi's sequence this is Zagheh VIII–0 (Malek Shahmirzadi 1977b:chart I, 97–245, figs. 8–53; 1979b). Unpublished strata above the Painted Building also date to this period (E. Negahban, pers. comm.). Other Cheshmeh Ali sites include Sialk II, excavated in Trenches 2 and 3 on the North Mound (Ghirshman 1938:24–27, pls. XI, XXXV, XXXVII, LVIII), and three sites near Tehran: the type site Cheshmeh Ali (Malek Shahmirzadi 1977b:427–31; Schmidt 1940:pls. 37–38; unpublished collections in the University Museum); Kara Tepe (Burton-Brown 1962); and Ismailabad or Tepe Moushelan (Navai 1976; Tala'i 1984). The depth of deposit assigned to Sialk II is 7.0 m, suggesting that the period is of some duration, at least in that part of the region. At present, however, there is not enough published data to warrant a formal division into phases here (but see Majidzadeh 1981:141).

At Zagheh, Crusted and Archaic Painted Wares continue throughout this period (Malek Shahmirzadi 1977b:280, table 8, pl. XIII), but there are significant changes in the latter. The Archaic Painted Ware of the Cheshmeh Ali period tends to have more complex painted designs, with several registers and more elaborate motifs (Malek Shahmirzadi 1977b:pls. VI:7–17, VII:11–22, VIII:13–26, IX:19–34, X:19–29, XI:14–27, XIII:Z40503, Z40246, Z40249, Z40247). Beginning in Zagheh VIII are Cheshmeh Ali or Sialk II Painted Wares. These are grit- or chaff-tempered, with a red surface that is usually slipped and smoothed before decoration with a black paint (Malek Shahmirzadi 1977b:279, 281–84, pls. V, VI:1–6, VII:1–10, VIII:1–11, IX:1–16, XIII–XVI; see also Ghirshman 1938:pls. IX, XLV–LI).

Cheshmeh Ali Painted Fine Ware is highly distinctive and can be used to establish a horizon style within western and northern Iran. Thin walled, it is fired so hard that it "clinks" when struck; the orange-to-red surface is painted in black with fine line motifs, including stylized birds and animals (e.g., Malek Shahmirzadi 1977b:pls. V:11, 19, 24, 28, 30–31, XIII:Z40239, Z40228). It occurs in quantity in Sialk II_{1-2} (e.g., Ghirshman 1938:pls. IX:1, 3, XLV:S1603, S1394; XLVII:B:11, 13, C:8, 13, 15, XLVIII:A:13, 15, 16, C:6–8, 10, 12, 15–17, D:4–5, 8–11, XLIX:A:13, 15, 17, 22–23, B:14–15, 18–20) and in the later part of the deposit at Cheshmeh Ali Tepe (McCown 1942:3, 7; Schmidt 1937:298–99, 319, n. 1). At Zagheh, it also appears in the topmost levels assigned to the Cheshmeh Ali period (Malek Shahmirzadi 1977b:430; Negahban 1973:7). At Chagha Sefid, it has been tentatively identified in late Surkh and Chogha Mami Transitional deposits, where it is called "Sialk Black-on-Red" (Hole 1977:134–33, figs. 52d, h, 53g; see also "Deh Luran"). To the east, it is found on sites between Qazvin and Tehran (Malek Shahmirzadi 1977b:406; Maléki 1968; Negahban 1981:13–14 with refs.), extending along the Elburz to Shahrud where it is known from excavations at Sang-i Chakhmaq East (Masuda 1974a:26, 1976:64). On the Gurgan Plain, Cheshmeh Ali Painted Fine Ware occurs at Hotu Cave and Tureng Tepe (see "Mazandaran/Gurgan").

Ceramic parallels for the Zagheh Archaic Painted Ware of the Cheshmeh Ali period lie along the western border of Iran. An unstratified sherd from Tepe Sarab is decorated with a motif characteristic of Zagheh—a narrow band or reserve lozenges (Malek Shahmirzadi 1977b:pls. VI:14–15, VIII:20–22, IX:32–33; Negahban 1976:fig. 30; McDonald 1979:148, pl. V); the collections from Sarab in the Royal Ontario Museum also contain sherds with small triangles at the rim that are duplicated by sherds of Zagheh Archaic Painted Ware in the collections of the University Museum (Voigt, unpublished notes; Malek Shahmirzadi 1977b:pls. IV:A, VIII:25). In Azerbaijan the latest Hajji Firuz pottery is decorated with nested lozenges and black-painted checkerboards (Malek Shahmirzadi 1977b:pls. VI:9, VII:20, XI:24; Voigt, in prep.).

Bricks used for domestic structures in the Zagheh Village sounding have four finger impressions at each end, and long grooves on the sides apparently made by drawing fingers along the clay (Malek Shahmirzadi 1979b:184, fig. 3). Long bricks with longitudinal grooves were used during the latter part of the Archaic period at Chogha Mish (Delougaz 1976:fig. 17; Delougaz and Kantor 1971:41, 1973:191). Sialk II walls were built of shorter bricks with two finger impressions at either end (Ghirshman 1938:26–27, pls. XI:4–5, LVIII); these are similar to bricks with rows of finger impressions along the sides from Iblis I and Yahya VII–VI (see "Southeastern Iran").

D. *The Ghabristan I (Plum Ware) period* is defined by levels 19–13 at Ghabristan (Majidzadeh 1977:48, 1981:142). Handmade Plum Ware has been coated with a brown-to-plum slip; vessels are sometimes decorated with applied or incised decoration at or below the rim (Majidzadeh 1977:54–56, pls. 76:2, 79–80). Excellent parallels for the fabric and molded decoration of Plum Ware vessels from late Ghabristan I occur in Godin VII (see "Godin"). Relationships with sites to the east are based on painted pottery and are somewhat more tenuous. Exact parallels for a bowl of Black-Painted Fine Ware with a zone of nested zigzags (Majidzadeh 1977:55, pls. 76:3, 80:1) are found in the sherd collections from Cheshmeh Ali and Murteza Gird at the Oriental Institute (Majidzadeh 1976:figs. 8:2, 5, 11:2).

Majidzadeh also identifies small cups and sherds from the Chicago collections as Plum Ware. Using some shape and design parallels between Cheshmeh Ali and Murteza Gird sherds, and published vessels from Sialk III$_{1-2}$ (Majidzadeh 1976:figs. 7, 8:1; Ghirshman 1938:pls. XLII:S393, 1811a, LXIII:S382, 1806), he postulates Plum Ware at Sialk and places a hypothetical Plum Ware phase at both Cheshmeh Ali and Sialk contemporary with the earliest part of Ghabristan I; Sialk III$_{1-3}$ is correlated with the rest of Ghabristan I (Majidzadeh 1981:142–43). Majidzadeh has documented no direct ties between Ghabristan I and Sialk III$_{1-3}$, and the two ceramic industries are very different in style, if not in technology. Nevertheless, given the strong relationship between Ghabristan II and Sialk III$_{4-5}$ (see below), an indirect argument can be made for the complete or partial contemporaneity of Ghabristan I and Sialk III$_{1-3}$. An evaluation of the chronology of upper Cheshmeh Ali (McCown 1942:7) and an evaluation of Majidzadeh's "Middle Plateau A–B" horizon (1981:142–44) must await complete publication of Schmidt's excavations at Cheshmeh Ali and Murteza Gird.

E. *The Ghabristan II period* is defined by levels 10–9 at Ghabristan (Majidzadeh 1981:142, 1977; Negahban 1974a:216). Buff Ware vessels are usually plain, while all vessels classified as Red Ware are decorated with brown-painted geometric and naturalistic motifs (Majidzadeh 1977:56–59, pls. 77–78, 81–93). Characteristic are spiral plant and comb designs, leopards, ibex, bulls, birds, and reptiles (Majidzadeh 1977:58–59, 1978:98). At Sialk, many of the motifs of Ghabristan II are found in early period III; however, the animal motifs characteristic of Ghabristan II first occur in Sialk III$_{4-5}$ (Majidzadeh 1978:96; compare Majidzadeh 1977:pls. 84–89 with Ghirshman 1938:pls. LXV:S1292, 260, LXVI:S1769, LXXVIII:B:4, 6, 7–8, LXXIX–LXXX). Related material also is found at Hissar IB (see "Damghan/Khorasan").

There are few ties between the ceramics of Ghabristan II and sites immediately to the west. One distinctive design is shared by Sialk III$_{4-7}$, Ghabristan II, and Godin VI: a band of thin vertical chevrons or zigzags below the rim, resting on a checkerboard band (Ghirshman 1938:pls. LXIV:S228, LXVI:S1400, LXIX:S1695, LXXIII:S1688). Given the close ties between Godin VI and Ghabristan IV (see "Godin"), we suggest that Ghabristan II is contemporary with Sialk III$_{4-5}$ (Majidzadeh 1978:101) and is earlier than Godin VI. If the link between Ghabristan III and Godin VII proposed here is valid, Ghabristan II would by default fall into the chronological range of Godin VII. Note that seals found in Godin VII contexts provide independent evidence for a correlation of this period and Sialk III$_{4-5}$ (see "Godin").

F. *The Ghabristan III (Gray Ware) period* is defined by Ghabristan levels 8–7, with a total depth of ca. 0.5 m (Majidzadeh 1981:142, 145). Given this shallow deposit, the period is likely to have been of short duration (but see Majidzadeh 1978). Majidzadeh has suggested that Ghabristan III represents a gap in the Sialk sequence between Periods III$_5$ and III$_6$. This is compatible with the links between Ghabristan II and Sialk III$_{4-5}$, and between Ghabristan IV and Sialk III$_{6-7}$ documented here.

Unique to Ghabristan III are bell-shaped bowls, sometimes decorated with incised bands of geometric elements such as hatched triangles or chevrons (Majidzadeh 1976:figs. 35:1, 36; 1977:59–60). The only potential dating evidence is provided by distinctive squat vessels with projecting hooklike handles and concave bases (Majidzadeh 1977:60, pls. 76:5, 94:2) that are very similar to containers for extramural burials assigned to Godin VII (E. Henrickson, pers. comm. 1984; Young and Levine 1974:13–14, fig. 16:1a, 4a).

G. *The Ghabristan IV period* is defined by Ghabristan Trench E levels 6–1 and Trench A:5–3 (Majidzadeh 1977:60; Malekzadeh 1977). The pottery from the two excavated trenches differs somewhat in vessel form and painted style. Beveled-rim bowls appear in quantity in Trench A:5–3, together with a conical cup (Majidzadeh 1981:146; see also 1976:fig. 37:1, 3, 4; 1977:61, pls. 96:6–7). Based on the presence of these forms, Trench A:5–3 is placed later than Trench E and designated as Ghabristan levels 3–1. The Trench E material is designated as Ghabristan 6–4 (Majidzadeh 1976:figs. 37:7, 9–11, 38:2, 4, 8, 44:1; Malekzadeh 1977:pls. 109–27). Ghabristan 6–4 corresponds to Sialk III$_{6-7}$ (Majidzadeh 1981:142). Sialk III$_{7b}$ was destroyed by fire, and the site was apparently unoccupied during part or all of the period corresponding to Ghabristan 3–1; stratigraphic evidence for this abandonment comes from what seems to be an erosion surface, on which the Sialk IV$_1$ deposits rest (Dyson 1965:237; Ghirshman 1938:pl. LIX).

Close ceramic parallels link Ghabristan IV with Godin VI and VI/V (see "Godin"). Characteristic of these occupations are plain incurved bowls (Majidzadeh

1976:fig. 37:10–11; Young 1969:fig. 8:24); incurved bowls with beaded rims (Majidzadeh 1976:fig. 38:2; Young 1969:fig. 8:6, 8); and pedestal-based bowls (Majidzadeh 1976:fig. 38:4, 6–7; Young 1969:fig. 7:22, 27–28). Painted designs shared by Ghabristan IV, Godin VI, and Sialk III$_{6-7}$ include leopards (Ghirshman 1938:pls. XVII:3, LXVII:S152, 137; Majidzadeh 1976:fig. 41:1, 1977:pl. 95:1–2; Young and Levine 1974:fig. 14:14); bulls in a "skid" position with S-curved horns (Ghirshman 1938:pls. XX:4, LXX:top row; Majidzadeh 1976:fig. 8, 1978:100; Levine and Young 1987:fig. 17:1, 4); vertical combs (Majidzadeh 1977:fig. 95:3; Young and Levine 1974:fig. 14:10, 20); clusters of three thin crosshatched triangles resting on annular bands (Ghirshman 1938:pl. LXXX:B:15; Majidzadeh 1977:pl. 95:4; Young and Levine 1974:fig. 14:9); and net patterns with dots at each juncture (Ghirshman 1938:pls. LXXII:S154, LXXXII:D:2, LXXXIII:A:19; Majidzadeh 1977:fig. 96:1–2; Young 1969:fig. 7:14).

H. *The Sialk IV (Proto-Elamite) period* is defined by the upper portion of the South Mound at Tepe Sialk (Ghirshman 1938:58–61, pls. LIX, LX). No other related sites are known in this region, although there may be some overlap in time with the latest part of Ghabristan IV. At Sialk, two stratigraphic units were distinguished: IV$_1$, which contained mud-walled structures and apparently produced most of the artifacts, and IV$_2$, a badly disturbed deposit above the brick walls (Ghirshman 1938:58–59, pls. LIX, LXXXVII). Two tombs containing the bodies of adults accompanied by rich grave goods were cut beneath the floors of IV$_1$, and two jar burials containing infants were dug into IV$_2$ (Ghirshman 1938:59–61, fig. 9, pl. XXXII). A large hoard of jewelry in a painted jar found beneath the floor of IV$_1$ is also associated with this period (Ghirshman 1938:pls. XXX:1, XC:S1689). The form and painted design of the jar are matched by a vessel assigned to Sialk III$_7$ (Ghirshman 1938:pl. LXXIV), suggesting that it may be an heirloom or that the hoard actually dates to III$_7$. Although hoards are notoriously difficult to date, there is no internal evidence to suggest that this material postdates Sialk IV.

Similarities in ceramic forms link Sialk IV with Susa Acropole I:17–17B and Tal-i Ghazir "Early Proto-Elamite" contexts (see "Susiana"). Parallels include beveled-rim bowls (Ghirshman 1938:pl. XC:S537, 34; Le Brun 1971:fig. 47; Whitcomb 1971:pl. VIII:J); bottles (Ghirshman 1938:pl. LXXXIX:S1645b, 1608; Le Brun 1971:fig. 17:5; Whitcomb 1971:pl. V:G–H; also Ghirshman 1938:pl. LXXXIX:S80, 2, 483; Le Brun 1978b:fig. 29:5); droopy or straight tube spouts on globular jars with everted necks (Ghirshman 1938:pl. LXXXIX, top 2 rows; Le Brun 1971:fig. 52, 1978b:fig. 31:4, 6, 10; Whitcomb 1971:pl. IV:A, D); carinated jars with trough spouts, and in some cases painted bands (Ghirshman 1938:pl. LXXXVIII:bottom 2 rows, XC:S7; Le Brun 1978b:fig. 24:9–10; Whitcomb 1971:pls. IV:J, VI:C, F); goblets (Ghirshman 1938:pl. XC:S244; Whitcomb 1971:pl. VI: B); and open bowls with lip spouts (Ghirshman 1938:pl. LXXXIX:S1645a; Whitcomb 1971:pl. VIII:D).

Nonceramic evidence provides better evidence for the duration of Sialk IV. Tablets attributed to Sialk IV$_1$, with numbers and only a few signs (Ghirshman 1938:pls. XXXI:2–7, XCII–XCIII), are comparable to those from Acropole I:17 or late Susa II (Carter 1984:129; Vallat 1971:243). Glyptic attributes shared with Acropole I:17–17B include animals with drilled eyes (Ghirshman 1938:pl. S1628; Le Brun 1971:fig. 44:2) and seated humans in front of vases with tall loop handles (Ghirshman 1938:pl. XCIV:S79; Le Brun 1978a:fig. 8:5). Amiet considers the Sialk IV$_1$ corpus stylistically transitional between the Susa II and III glyptic (1961; see also Carter 1984:129). A horn or antler from Sialk IV with an incised crosshatched band at the large or "head" end (Ghirshman 1938:pl. XXIX:5) appears to be paralleled by a bronze artifact from Susa I:17B (Le Brun 1978b:fig. 40:8). To the west, a seal and at least one sealing are very similar in content and style to a seal from Godin VI/V (Ghirshman 1938:pl. XCIV:S48, 1614; Weiss and Young 1975:fig. 5:8, pl. IVa). Some Sialk IV$_1$ tablets also resemble those from Godin VI/V (Weiss and Young 1975:11). Although there are few ceramic parallels between Sialk IV$_1$ and Godin VI/V, the latter does have an independent set of ceramic ties to Susa 17 (see "Susa Area").

A single tablet assigned to Sialk IV$_2$ (Ghirshman 1938:pls. XXXI:1, XCII:S28) has a variety of signs and is similar to those from Susa III, the Banesh phase in Fars and Yahya IVC (Vallat 1971:243; see "Southwestern Iran," "Yahya"). Parallels for unusual metal artifacts suggest that the end of Sialk IV$_2$ may be as late as the Early Dynastic III period (Dyson 1965:226 with refs.). After this period, Tepe Sialk is abandoned until the late Iron Age.

I. *The Early Bronze period* is known only from surface remains: a single site with Yanik Early Bronze/Godin IV pottery located on the Qazvin Plain 1 km southwest of Sagzabad (E. Negahban, pers. comm.).

J. *The Sagzabad or Middle Bronze period* is defined by the basal levels of Trench A and Trench OXX levels 1–4, or Sagzabad period I (Negahban 1976; Malek Shahmirzadi 1977a:67–76). Dominating the ceramic industry is Sagzabad Polychrome Ware which employs red and/or black paint on red and buff or orange slips applied to a handmade grit-tempered fabric of red, orange, or buff (Malek Shahmirzadi 1977a:pls. 136–40; see also Negahban 1976:pl. 139:8–9). There is little evidence for the dating of this period. Ceramic parallels from far distant Kansu Province in China suggest that it may begin in the late third millennium B.C. (Egami 1972:305 with comparanda). Small quantities of pottery similar in fabric to rare Fine Gray-Burnished Ware (Malek Shahmirzadi 1977a:76, pls. 141:1–2, 4–9, 10–13, 142:1, 5) occur in the Late Bronze Age assemblage at Dinkha Tepe in Azerbaijan, which dates to the earlier half of the second millennium B.C. (Hamlin 1974a). The form of a grayware cup from the top of the Sagzabad I deposit is common in Iron Age I contexts (Malek Shahmirzadi 1977a:pl. 142:1; Young 1965:fig. 8:1), perhaps indicating that Sagzabad I ends in the middle of the second millennium.

Northeastern Iran

The Damghan/Khorasan Sequence

Information for the prehistoric period comes primarily from the Damghan Plain south of the Elburz Mountains and the Atrek and Darreh Gaz Valleys which lead north toward Turkmenistan. The Neolithic sequence is based on excavations carried out by the Japanese-Iranian Joint Archaeological Mission at the double mound of Sang-i Chakhmaq, just to the east of the Damghan Plain (Masuda 1972, 1974a, 1974b, 1976). The Bronze Age is known from excavations at Tepe Hissar conducted by Erich Schmidt for the University Museum during 1931–32 (Schmidt 1937) and from a 1976 restudy by a team from the Iran Center for Archaeological Research, the University of Turin and the University Museum, under the direction of Robert H. Dyson, Jr., and Maurizio Tosi (Dyson and Howard, 1989). In addition to a reexamination of Schmidt's trenches and limited excavation, the Hissar Restudy Project made a survey of the Damghan Plain (Trinkaus 1981) and a surface study of the site aimed at the identification of functionality specialized areas (Bulgarelli 1977). Surveys in the Darreh Gaz (Kohl and Heskel 1980, 1982) and Atrek (Ricciardi 1980) Valleys, which recovered pottery assigned to Namazga periods I and III–IV, provide a direct link between Iran and Turkmenistan.

Schmidt's Hissar sequence, a major building block for this as well as previous chronologies, relied heavily on a stylistic analysis of grave goods rather than stratigraphic data (1937:39). A study of the Hissar archives indicates that in a number of instances interpretations of field data proved correct by the restudy project were either ignored or reversed by Schmidt (1937). During the restudy, areas on the North Flat, Main Mound, South Hill, and Twins were examined (Schmidt 1937:fig. 16). These produced consistent chronological, typological, and stratigraphic results. The key to the revised sequence was developed in the Main Mound, where Schmidt (1937:155–57, fig. 19) had provided an outline of his assigned phases for a 7-m deep exposure. Howard's revision breaks the sequence into six phases, A to F from the top down, that apply to the occupational stratigraphy of the site as opposed to Schmidt's burial seriation (Dyson and Howard, 1989; Howard 1982). Because much of the material in Schmidt's broad chronological units, Hissar I–III, can be related to the stratigraphic phases worked out in 1976, we have retained those terms here. The A, B, C subdivisions within Schmidt's periods have been abandoned since they are artificial stylistic constructs unsupported by the stratigraphy.

A. *The Sang-i Chakhmaq period* is defined by levels V–I in the West Tepe, with V at the base (Masuda 1972:2). Pottery is extremely rare, and no vessel forms could be reconstructed (Masuda 1976:65). The only published evidence useful for dating is clay figurines (Masuda 1974a:25, fig. 3:10–13). T-shaped figurines resembling those from Sang-i Chakhmaq West are common from the Mohammad Jaffar to Surkh phases in Deh Luran, with the highest frequency in Surkh (Masuda 1974a:fig. 3:12; Hole 1977:fig. 91h–n, table 67), and in the Archaic phase in Susiana (Hole 1974:fig. 15f–k). At Jarmo this figurine type is restricted to the upper levels ("double wing-based objects," Morales 1983:385, figs. 164:7–11, 165). Animals with legs extended to the front and rear were also found at Chagha Sefid in the Sefid and Surkh phases (Masuda 1974a:fig. 3:13; Hole 1977:fig. 89d, i, table 67), and in contemporary or slightly earlier contexts at Tepe Tulaʿi (Hole 1974:fig. 15a). At Jarmo they occur in Op. II:2–4 or the upper levels, contemporary with the Sefid phase (see "Deh Luran"; Jarmo types D-2, E–H, N, Morales 1983:figs. 150:1, 8, 151:1–6, 152:1, 5–7, 153:3, 154:9–13).

B. *The Djeitun period* is defined by the lower strata at Sang-i Chakhmaq East, levels VI–III (Masuda 1976:63–64). These deposits contained hard, dense, chaff-tempered pottery, with an orange-to-buff surface and gray core; decorated sherds are burnished and have brown-painted geometric designs (Masuda 1972:fig. 6, 1974a:fig. 5, 1976:63). The Painted Ware is virtually identical to that found at Djeitun sites in Turkmenia (Masuda 1976:63; compare Masuda 1972:fig. 6; 1974a:fig. 5; Masson 1971:pls. XXIX–XXXI, fig. 13; Masson and Sarianidi 1972:fig. 7) as well as at geographically intermediate sites in Gurgan (see "Mazandaran/Gurgan"). Other industries are equally similar, with similarities in geometric microliths and borers (Masuda 1972:fig. 7:6, 1974a:fig. 4:6–10, 1976:63, fig. 7:9–10; Masson 1971:pls. X–XI, XVI, XVIII–XIX); rich bone industries with bone sickle hafts, needles, and awls (Masuda 1972:fig. 7:9–13, 1974a:fig. 4:1–5); clay "cosmetic objects"/mini-mortars (Masuda 1972:fig. 7:1–3; Masson 1971:pls. XL:13–15, XLI:5–6); flat, square, or round whorls (Masuda 1972:fig. 7:8, 1974a:fig. 4:13–14, Masson 1971:pl. XXXIX); and carved figurines of horned animals (Masuda 1972:fig. 7:5; Masson 1971:pl. XXXVIII:11). In fact, the only major difference between the assemblages from Djeitun and Sang-i Chakhmaq East VI–III is the architecture (Masuda 1972:fig. 4–5, 1974a:26, fig. 1, 9; Masson 1971:fig. 19). Although only a small sample from Sang-i Chakhmaq has been published, it appears to span the entire time range represented at Djeitun (Masson and Sarianidi 1972:fig. 7).

Numerous artifact parallels relate this period to sequences in the west. Painted designs and motifs link the Djeitun period to Sialk I: stacked inverted triangles (Masuda 1972:fig. 7:6; Ghirshman 1938:pls. XLII:B, 7, XLIII:D, 2); open crosshatching over the entire exterior surface (Masuda 1972:fig. 6; Ghirshman 1938:pl. XXXIX:S1274); dots (Masuda 1974a:fig. 5:4; Ghirshman 1938:pls. XL:C, 5, XLI:B, 3); vertical nested zigzags (Masuda 1976:fig. 7:2; Ghirshman 1938:pl. XL:A. 10); nested regular or irregular wavy lines (Masuda 1974a:fig. 5:6–8; Ghirshman 1938:pls. XL:C, 2, XLI:B, 7, XLIII:A, 3, 5, 10; see also Masson 1971:fig. 16). Black burnished sherds (Masuda 1976:63) may be related to black pottery from Sialk I (Ghirshman 1938:16) and from the early deposit at Cheshmeh Ali (collections of the University Museum). Other Djeitun types in Sialk I are clay "cosmetic objects" (Ghirshman 1938:pl. LII:37–39) and bone sickle hafts with animal heads (Ghirshman 1938: pls. VIII:2, LIV:II), types also found in the Mushki period in Fars (see "Marv Dasht"). A few isolated but striking ceramic parallels in design, vessel form, and technology link Djeitun and Tepe Tula'i or the Archaic period in Khuzistan (Masuda 1974a:fig. 5:6–7; Hole 1974:figs. 11j–q, 14a–b); also reported at Tula'i is "gray ware" (Hole 1974:228). Further evidence to support this correlation is the presence of cosmetic objects and geometric microliths in the Sefid and Surkh phases in Deh Luran, independently linked to Chogha Mish Archaic 1 (see "Deh Luran" and "Eastern Susiana").

C. *The Cheshmeh Ali period* is defined by levels II–I at the top of the East Mound at Sang-i Chakhmaq (Masuda 1976:64). Buildings are generally similar in plan to those of the preceding levels (Masuda 1976:63, figs. 1–2, 6; note that the captions of figs. 5–6 are reversed), but a new element is the use of "stamp-impressed" mudbricks of the type found in Sialk II (Masuda 1976:63; see "Qazvin/Kashan"). Painted pottery included a mixture of Djeitun Painted Ware and Cheshmeh Ali Ware (see "Qazvin/Kashan"). The hard, thin Cheshmeh Ali Ware, which predominates in level I (Masuda 1976:64), links Sang-i Chakhmaq East I–II to sites in the Qazvin/Kashan area, and to the Surkh and CMT phases in Deh Luran (q.v.). A vessel from an unspecified context in the East Tepe has a design that is common on Archaic Painted Ware from the Cheshmeh Ali period at Zagheh (Masuda 1976: fig. 7:3; see Malek Shahmirzadi 1977b:pls. VII:17, XIII:Z40503, 40246).

D. *The Hissar IA/B period* is defined by Schmidt's excavations in the Painted Pottery Flat, in the Main Mound, and in the North Flat (Schmidt 1937:21–39, fig. 21); the restudy project did not reach these phases. Hissar IA/B Painted Ware is decorated with geometric, plant, and animal motifs, primarily gazelles and birds (Schmidt 1937:40, figs. 32–36, pls. III–VI; see also Yule 1982:fig. 4). Close parallels occur in Sialk III$_{1-5}$ (McCown 1942:7, figs. 2–3), including deep, small-based bowls with a row of chevrons on a checkerboard band (Schmidt 1937:pl. IV:H2060; Ghirshman 1938:pl. LXIV:S228); pedestal-based bowls and jars (Schmidt 1937:pls. III, top, IV; Ghirshman 1938:pl. LXIII); coiled plants and arrow-headed snakes with hatched bodies (Schmidt 1937:pl. V, bottom left; Ghirshman 1938:pl. LXII:S1693); rows of dancers (Schmidt 1933:pl. LXXXVIII:Hd23; Ghirshman 1938:pl. LXXV:1, 7); ibex with a star inside curving horns (Schmidt 1937:pl. V:H2063; Ghirshman 1938:pl. LXXIX:A:13, B:7); rows or files of stacked birds (Schmidt 1937:pls. VI:DH34, 10, 31, DH44, 10, 3; Ghirshman 1938:pls. LXXX:A:7, B:5). The form and complex pattern on a round and a square seal from Hissar IB are nearly identical to seals found in Sialk III$_{4-5}$ (Schmidt 1937:pl. XV:H4708, 3829; Ghirshman 1938: pl. LXXXVI:S246, 232).

E. *The Hissar IC/IIA period* is now defined by the lowest levels reached in 1976 on the Main Mound E and F, and North Flat, corresponding to Schmidt's IC/IIA assemblages (Dyson and Howard 1989). In the 1976 stratigraphic sample, Buff Ware predominates, with lesser amounts of Red Ware. Burnished Gray Ware bowls on tall-pedestal bases, deep bowls with flaring rims, and short- and long-necked bottles are already in use as shown from closed excavation contexts. Mineralogical analyses indicate that the same local sources of clay were used for all three wares (Dyson 1983b; Dyson and Howard 1989).

A limited number of very close parallels in Painted Ware forms and design links this period to Sialk III$_{6-7}$. Examples include deep bowls on high ring bases with bands of leopards (Schmidt 1937:pl. VIII:H4479; Ghirshman 1938:pl. LXVII:S152); shallow open bowls with a zone below the rim filled with panels of vertical lines and a pedestal base decorated with annular bands (Schmidt 1937:pl. IX:H3421; Ghirshman 1938:pl. LXX:S116, 9bis); and high ring-based jars with panels of vertical wavy lines and "trees" (Schmidt 1937:pl. X:H4637; Ghirshman 1938:pl. LXVII:S69, 1810; for additional parallels see Dyson 1965:238–39).

F. *The Hissar II period* is defined by phases C–D in the 1976 sequence, which includes Buildings 1–3 on the Main Mound assigned by Schmidt to period III (1937:fig.

86) and graves assigned by Schmidt to Hissar IIB (Dyson and Howard 1989). The working of lapis, evident in small quantities at the end of the preceding period, now becomes extensive, and a massive local production of copper is attested by copper ore, slag, and furnace fragments (Pigott, Howard, and Epstein 1982).

The only closely related ceramic industries are in Gurgan. Parallels between Hissar II and Tureng Tepe IIB include a fine, thin black pottery bowl decorated with parallel incised lines from just below Building 3 at Hissar (Dyson 1983b:fig. 18a; Deshayes 1965:88, pl. XXVIII:18); pedestaled bowls (Schmidt 1937: pls. XXV:H4767, XXVI:H5153; Deshayes 1965:pl. XXVIII:20); and pattern burnishing (Dyson and Howard 1989, contra Schmidt 1937:308; Deshayes 1965:pl. XXVII:17). The surface-manipulated Gray Ware of Tureng Tepe IIB (see "Mazandaran/Gurgan") is rare at Hissar.

Ties to other sites depend on parallels in the stone and metal industries. Hissar II and Sialk IV$_1$ share copper pins with double spiral heads (Schmidt 1937:pl. XXIX:H4856; Ghirshman 1938:pl. XCV:S1602e) and a teardrop-shaped pendant (Schmidt 1937:pl. XXXII:H2187; Ghirshman 1938:fig. 9). Square beads pierced diagonally across two corners (Schmidt 1933:pl. CVIII:H1202) are found in Yahya IVC (Potts 1980:fig. 57a), Susa Acropole I:14B–15 (Le Brun 1971:fig. 70:2, 4), and in Mesopotamia from Jemdet Nast to Early Dynastic II times (McCown 1942:51, fig. 14). Also linking Hissar II and Proto-Elamite Susa is a copper spiral bracelet (Schmidt 1937:pl. XXVIII:H2170, 2194; Le Brun 1971:fig. 67:18). Flat trapezoidal stone beads pierced perpendicular to the parallel sides occur in Hissar II (Schmidt 1937:231, pl. LXVIII:H2107, redated by 1976 study), Shah Tepe AIII (Arne 1945:pl. XCII, fig. 611b), and the Sialk IV$_2$ hoard (Ghirshman 1938:pl. XXX:1; see also McCown 1942:fig. 15). A crescent-shaped lapis bead associated with the trapezoidal bead (Schmidt 1937:H2107) is paralleled in Gawra VIII (Speiser 1935:pl. LXXXIII:4) and Mundigak I (Casal 1961:fig. 138:3). Eight pillow-shaped tablet blanks excavated from Hissar II context in 1976 are comparable to those from Sialk IV$_1$ (see Dyson 1987).

Thus numerous artifact parallels indicate a correlation of Hissar II with Proto-Elamite sites in Iran, and with Jemdet Nasr to Early Dynastic II settlements in Mesopotamia. How long the period lasted into the third millennium remains problematical, since Schmidt's period IIIA lacks stratigraphic definition.

G. *The Hissar III (Middle Bronze Age) period* is defined by phases B–A of 1976 (Schmidt 1937:157–71, figs. 90–92; revised plan in Dyson 1977:420). Based on stratigraphy, our Hissar III can be divided into two phases. Early III consists of the Burned Building, which is roughly equivalent in time to Schmidt's IIIB graves. Late Hissar III is documented by levels overlying the Burned Building which contain clusters of artifacts, including a large number made of alabaster. This material is augmented by graves and hoards elsewhere in the upper levels of the site assigned by Schmidt to IIIC (see Dyson and Howard). Schmidt's Hissar IIIA has no stratigraphic definition and is therefore not usable for chronology. Within the ceramic industry, the tall pedestal bowls, goblets, and chalices characteristic of Hissar II have now disappeared, leaving pear-shaped bottles and canteen jars as typical forms (Schmidt 1937:pls. XXXVII–XLIII). Spouted vessels occur in pottery, metal, and alabaster (Schmidt 1937:catalog).

Both architecture and artifacts link Hissar III to Altyn-Depe in Central Asia. Five insets into a plastered wall of the Burned Building that Schmidt interpreted as female figures (1937:fig. 93; Dyson 1977) are more likely related to the stepped niches found at Altyn-Depe and dated to the Middle Bronze Age or Namazga V period (Masson 1981a:pl. I:1). Other parallels with Namazga V settlements include compartmented bronze seals (Schmidt 1937:fig. 118:H2697, 2698; Masson and Kiiatkina 1981:fig. 2, lower left); beads in the form of a stepped square (Schmidt 1937:pl. LV:H2365, fig. 35; Masson 1981a:pl. XXII:4); and large alabaster discs with handles (Schmidt 1937:pl. LXIII:H3492, 2895; Masson 1981a:fig. 22:1). Flat oval gold beads with raised medial perforation (Schmidt 1937:fig. 138, pl. LXVI:H2360, 2361) occur in the funerary complex at Altyn-Depe (Masson and Kiiatkina 1981:fig. 11) and in Troy IIg (Blegen et al. 1950:illus. 356:17, 357, 37–712) and Mohenjo-Daro (Wheeler 1968:pl. XXVI). Alabaster minicolumns from graves stratified above the Hissar III Burned Building (Schmidt 1937:fig. 132, pl. LXI) are similar to those found in Tureng Tepe IIIC1 and other sites to the east and south, again indicating influence from Central Asia and Sistan (See "Hilmand Basin"; Masson 1981b:fig. 3). Since there is no evidence of alabaster working at Hissar, and since these items appear abruptly in the sequence, we conclude that they were imported.

There are numerous parallels between Hissar III and Shahdad (q.v.). To the west, McCown (1942:table 1) documents parallels with the Mesopotamian sequence ranging in time from Early Dynastic III to Ur III. Metal parallels with the Levant (Dyson 1965:242) suggest that Hissar III continued into the beginning of the second millennium B.C. (see also Carter 1984:139 with additional refs.).

The Mazandaran/Gurgan Sequence

This region consists of the Caspian coastal plain at the southeastern corner of that sea and the adjacent plain liest part of the Gurgan sequence is known from excavations at Belt and Hotu Caves carried out for the University Museum by Carleton S. Coon (1951, 1952, 1957; Dupree 1952). The later Neolithic to Bronze Age sequence is stratigraphically related at Yarim Tepe, known from incompletely published excavations directed by David Stronach for the British Institute of Persian Studies (Crawford 1963; Stronach 1972). More complete information on the Bronze Age comes from Tureng Tepe, a cluster of mounds initially tested by Wulsin for the University Museum (Daher 1969; Wulsin 1932) and recently subjected to intensive investigation by the French Archaeological Mission under the direction of Jean Deshayes (1963, 1965, 1966, 1968a, 1968b, 1969a, 1969b, 1970, 1972, 1973a, 1973b, 1974a, 1974b, 1976a, 1976b). Additional Bronze Age material was obtained from Shah Tepe, excavated by T. J. Arne (1945) for the Sino-Swedish Expedition.

A. *The Aceramic Neolithic period* is defined by material from Hotu Cave labeled "Sub-Neolithic" and by Belt Cave levels 10–8 (Coon 1951:30–31, 1957:149–51, 211, 215). The small sample of chipped stone from Hotu includes blades and microblade cores, but consists predominantly of flake and pebble tools (Dupree 1952:250–53, 257, figs. 9–36). Its stratigraphic position, beneath levels assigned to the Djeitun horizon, indicates that it is probably contemporary with or earlier than the Sang-i Chakhmaq Neolithic.

B. *The Software Neolithic period* is defined by upper Belt Cave, levels 7–4, and by Hotu − 8 to − 6.2 m, stratified below levels with painted pottery (Coon 1951:41, table 2A, 16; 1957:185, 209, 211). These deposits produced a soft, thick, chaff-tempered pottery. The surface was often burnished and in some cases had been rubbed with red ochre; a few pieces from Hotu had a rich chocolate brown slip or a fugitive red paint (Dyson notes on sherds in the University Museum Collection; see also Coon 1951:78; Matson 1951). Pottery technologically similar occurs in the Yahya VII–VI, Iblis 0–I and Shamsabad periods in the southern plateau (See "Yahya" and "Marv Dasht"). However, since deposits with Djeitun and Cheshmeh Ali Wares are stratified above those with Software at Hotu, and since the relative chronology for the west and south places Shamsabad and related assemblages later than the Cheshmeh Ali horizon, the Caspian Software Neolithic must be part of a tradition earlier than the porous chaff-tempered wares of Yahya VI, Iblis I, and Shamsabad. It may be contemporary with Yahya VII, but a comparison of the dense fabric from the latter site and the Belt/Hotu software has not yet been made.

C. *The Djeitun period* is defined by the lowest strata at Yarim Tepe, or the Yarim "Early Chalcolithic" (Crawford 1963:272–73). Sherds from this deposit in the University Museum collections include chaff-tempered pottery with geometric designs comparable to that at Djeitun in Turkmenistan, and at Sang-i Chakhmaq East (see "Damghan/Khorasan"). Within Gurgan, Djeitun sherds also occur at Tureng Tepe, incorporated in bricks made in later periods; they are assigned to Tureng "Period IA" which is assumed to lie below the water table (Deshayes 1967:123–25, pl. Ia, d, fig. 1a–c; 1969a:12).

D. *The Cheshmeh Ali period* is defined by Hotu Cave Trench B, the 560 and 580 cm strata (Coon 1952:243; Dyson notes based on a study of the University Museum collection and archives). Sherds of classic Cheshmeh Ali Painted Fine Ware place this occupation within a widespread horizon on the plateau (see "Qazvin/Kashan"). At Tureng Tepe, Cheshmeh Ali Painted Ware is assigned to Period IB, again presumably below the water table ("Ismailabad" Ware, Deshayes 1967:fig. 2d–e, 1970:207, 1973b:fig. 8).

E. *The Tureng IIA period* is defined by Tureng Tepe Sondage A:levels 26–20 (Deshayes 1966, 1967:125). The same assemblage is found at Yarim Tepe in period II, where it was originally designated as the "Late Chalcolithic" (Crawford 1963:272–73; Stronach 1972:22), and in Shah Tepe III (Arne 1945). The ceramic industry includes Black-Painted Red-Slipped Ware (Arne 1945:164–67,figs. 276, 278, 281–98, pls. XLI, XC–XCI; Deshayes 1967:pls. Ib–c, II–III, fig. 1d–j) and Burnished Gray Ware (Arne 1945:171–80, 236, figs. 301a–12, pls. XXI:fig. 167–68, XXII:170a–73, XLIII–XLVIII; Daher 1969:68–69, fig. 1; Deshayes 1966:pl. I:3, 1969a:12, top, 13).

Based on the presence of both painted and gray wares, the Gurgan Late Chalcolithic has been placed contemporary with Hissar IC/IIA (Arne 1945:307; Deshayes 1966:3, 1970:208). There are, however, major differences in the ceramic traditions of the two regions. The Gurgan Painted Red Ware differs from that of Hissar IC/IIA in technology (Boucher et al. 1976), form, and decoration (e.g., Arne 1945:pl. XC, fig. 664; Schmidt 1937:pls. VII–XIII, XX–XXII; see also Yule 1982:fig. 5). Moreover, the basic Gray Ware of the two regions differs in surface treatment: incised and appliquéd decoration on Gray Ware is common in Tureng IIA and Shah III, but virtually absent from The Gray Ware of Hissar IC/IIA. The range of vessel forms also differs (Arne 1945:fig. 664; Yule 1982:fig. 6B). Pedestaled bowls occur in Tureng IIA and Hissar IIA, but also in Hissar IIB (Deshayes 1966:pl. I:3; Schmidt 1937:pls. XXIII: H. 2998, XXVI:H.5119). A trapezoidal lapis bead from Shah III is paralleled in Hissar II or later (see "Damghan/Khorasan"). The best evidence for contemporaneity comes from the appearance of small items of jewelry, such as double spiral wire pendants (Deshayes 1966; Schmidt 1937:pl. XXX:A, H2982), which occur at both sites. There is also a single brown-on-buff sherd with a sloppily painted ibex and star motif found in Shah III which appears to be a Hissar IC import (Arne 1945:fig. 299a; Schmidt 1937:pl. X:H802). We conclude that the exact correlation of this period relative to Hissar should be left open, pending the complete publication of Tureng IIA and Yarim II.

F. *The Tureng IIB period* is defined by Tureng Tepe Sondage A:levels 18–12 (Deshayes 1965:86–89). During this period, only Burnished Gray Ware is in use. Incised and grooved decoration continues, and pattern burnishing makes its initial appearance (Arne 1945:178–80; Deshayes 1965:pls. XXVII:17, XXVIII:18–19; 1969a: 12–13). A "goblet" from Tureng IIB (Deshayes 1965:pl. XXVIII:20) is not the bowl-on-pedestal of Hissar I, but is of the type found in Hissar II (Deshayes 1965:pl. XXVIII:20; Schmidt 1937:pls. XXV:H4767, XXVI:H5153). Although Schmidt (1937:308) states that at Hissar "definite burnished designs were not found prior to Hissar IIIB," the 1976 restudy found such sherds in a closed context firmly dated to Hissar II (Dyson 1983b).

G. *The Tureng Tepe III period* is defined by Tureng Sondage A:levels 11–2, Sondage C:3–1, Sondage D:9–2, Sondage E:5, and the High Terrace excavations (Deshayes 1965:84, 1969b:140, fig. 1, 1976a). Other occupations in this period are Yarim Tepe III (Crawford 1963:273) and Shah Tepe IIB–A (Arne 1945). Deshayes has delineated four phases for Tureng III: IIIA, IIIB, and IIIB–IIIC1 transition, and IIIC1 (Deshayes 1970, pers. comm. 1976). While these phases are significant in the history of the site and region, the brief preliminary reports available at present indicate that there is a great deal of continuity between them, and it is sometimes necessary to discuss the period as a whole for comparative purposes.

A series of ceramic parallels links Tureng IIIA with Hissar II. Deep bowls with slightly flaring rims (Deshayes 1965:pl. XXV:8) are characteristic of Hissar graves assigned by Schmidt to IIB (Schmidt 1937:pl. XXV:H4838), and tall pedestals with a conical base (Deshayes 1965:pl. XXIV:7) were found in a sealed Hissar II occupation level (Dyson 1983b). A long-necked, pattern-burnished bottle from Tureng IIIA is duplicated in graves assigned by Schmidt to Hissar IIIB (Deshayes 1965:pl. XXIII:3; Schmidt 1937:307, fig. 105, pl. XXXVII:H2227). It is also found in habitation debris excavated in 1976b and dated to Hissar II (Dyson and Howard, 1989).

Other peculiar ceramic forms link Tureng III with Hissar III. Dippers or cylindrical vessels with a loop handle extending vertically from the rim were found in Tureng IIIC1–2 (Deshayes 1969b:147–49, fig. 69; 1973b:fig. 7), Shah II (Arne 1945:209, fig. 420a, pl. LIII), and Hissar IIIB (Schmidt 1937:pl. XXXIX:H1734) as well as Troy IId and IIg (Blegen et al. 1950:289, fig. 406). Jars in the form of a female torso are found in Shah IIa (Arne 1945:fig. 412) and Hissar IIIC (Schmidt 1937:fig. 115, pl. XLVI:H2790). Canteens with pattern-burnished ovoid bodies, tall necks and tiny loop handles at the base of the neck are found in Shah IIa (Arne 1945:fig. 408), Tureng III (Deshayes 1968b:pl. 48), and Hissar IIIC (Schmidt 1937:pl. XL:H4219). Squat concave-sided vessels with flat bases and pattern-burnished bands on the side are found in Tureng IIIB–IIIC2 (Deshayes 1969b:144, fig. 12), Shah II (Arne 1945:figs. 367, 368), and Hissar IIIC (Schmidt 1937:pl. XLII:H3483 from the "Hoard" on Treasure Hill).

Miniature "columns" of limestone from the massive brick Terrace building of Tureng Tepe IIIC1 (Deshayes 1976a:fig. 1, 1976b:pl.II:f) are duplicated in Hissar IIIC (Schmidt 1937:pl. LXI, fig. 132), the Cult Building at Altyn-Depe (Masson 1968:191, pl. XXV), and at other sites in Bactria (Amiet 1977:fig. 10) and Sistan (Dales 1977). Bands of crosshatched pattern burnishing of Tureng III type (Deshayes 1969a:14, 15 top; Crawford 1963:fig. 14) also occur at Dashly 3 in Bactria, which is contemporary with Namazga V in Turkmenistan (See Kohl 1984:166–69); note that Namazga V is independently linked to Hissar III (see "Damghan/Khorasan"). Lapis rhomboidal beads from Tureng IIIA are found in Namazga V at Altyn-Depe and also provide a direct tie between Tureng III and Mesopotamia since they occur in the Royal Cemetery at Ur (Deshayes 1969a:14; Woolley 1934:pl. 143c–d; see also Dyson 1965:240–41). Finally, Deshayes (1977:100–101) notes the presence of high-terraced structures similar to that of Tureng IIIC1 in Altyn-Depe 7 or the Namazga V period, and in Mundigak IV ("Monument Massif"; Casal 1961).

Thus artifact parallels indicate a relatively long span of time for Tureng III, parallel to both Hissar II and III. The links to Hissar III and sites in Turkmenistan are striking. Those to Hissar II are difficult to interpret given the problems with Schmidt's sequence and a lack of information on the span of time represented by ceramic forms at both Tureng and Hissar. We therefore place Tureng IIIC contemporary with Hissar III and leave open the question of the relationship of Tureng IIIA–B and Hissar II/III.

Radiocarbon Evidence for Northeastern Iran

The earliest well-dated chronological unit in the northeast is Hissar IC/IIA, with a cluster of six radiocarbon determinations yielding an average corrected range of 3980–3865 B.C. Relative dates indicate that Hissar IC/IIA and the closely related ceramic assemblage of Sialk III_{6-7} are somewhat later than Susa A, which has a corrected average range of 4115–3880 B.C. A cluster of twenty determinates places the 1976 sample from Hissar

II within the range from 3365–3030 B.C. (tables 1–2). This is fully compatible with the relative chronological evidence that places Hissar II contemporary with the Proto-Elamite horizon, dated at Malyan to the late fourth millennium (see "Marv Dasht"). Clusters from Hissar III and Tureng Tepe IIIC place these related assemblages from 2400–2170 and 2170–1900 B.C. respectively. This conforms with historical dates from Mesopotamia: based on artifact parallels, Hissar III is correlated with the time spanned by Early Dynastic III to Ur III,ca. 2600–2000 B.C. (Porada et al., this vol., chap. 5).

Northwestern Iran (Azerbaijan)

Southern Urmia Basin: The Hasanlu Sequence

South of Lake Urmia lies the Ushnu-Solduz Valley. This rich, well-watered plain forms a crossroad, with routes leading west through the Keleshin Pass into northern Mesopotamia, east onto the plateau, and north into the Caucasus. Research in this area has been carried out from 1956 to 1977 by the University Museum of the University of Pennsylvania, under the general direction of R. H. Dyson, Jr. (Dyson 1969, 1972, 1983a with refs; see also Levine and Young 1977:399–405). Information on the early part of the regional sequence, Hasanlu periods X–VII, comes primarily from excavations at Hajji Firuz, Dalma, and Pisdeli Tepes, and from a well dug through the citadel mound at Hasanlu (Dyson 1967b, 1969, 1983a; Dyson and Young 1960; Hamlin 1975; Voigt 1983; Young 1962).

A. *The Hasanlu X (Hajji Firuz) period* is defined by excavations at Hajji Firuz Tepe. Thirteen phases of the occupation labeled L through A were distinguished, with most of the excavated material coming from the latter part of the occupation, phases D–A (Voigt 1983:18–30). In addition, a few Hajji Firuz sherds were also found in a mixed wash layer at the base of Dalma Tepe (Hamlin 1975: 113). To the east of Lake Urmia, the Neolithic assemblage from Yanik Tepe is sufficiently similar to be considered part of the same tradition (Burney 1964; Voigt 1983:95).

Hajji Firuz Ware is chaff-tempered and poorly fired; decorative techniques include the use of a red or brown slip, painted designs, and (rarely) incision (Voigt 1983:figs. 92–98). These characteristics, plus vessel forms such as husking trays, carinated bowls, and collared jars with ovoid or carinated bodies, link the Hajji Firuz ceramics to early Hassuna sites such as Umm Dabaghiyah, Telul eth-Thalathat XVI–XV, and to a lesser extent Hassuna levels I–II. However, the presence of imported sherds as well as columnar or skirted figurines with high-domed heads indicates that Hajji Firuz phases D–A are contemporary with the later part of the Hassuna period and with "classic" Samarra (Voigt 1983:101–2, 163–67, 178–81, with refs.). The pattern of Hassuna/Samarra parallels has led Voigt to speculate that the Hajji Firuz farmers migrated into Solduz from northern Mesopotamia in the latter part of the seventh millennium.

Although Young (1962) originally saw a close relationship between Hajji Firuz and sites within the Zagros Group, there are only general technological and stylistic similarities between Hajji Firuz and late Zagros Group ceramics, specifically Sarab Linear Ware. On the other hand, there are good parallels in ceramic form and decoration between Hajji Firuz and Jarmo Operation II:4–1 (Adams 1983:figs. 105:1–4, 107:1, 3–4, 108:1–5, 109:1–8; Voigt 1983:figs. 82, 84:i, 92–93). A few sherds with linear painting from the upper levels at Jarmo are indistinguishable from Hajji Firuz D–A pottery (Voigt 1983:160–63).

Several of the chipped stone types are very distinctive and have limited occurrence in adjacent regions. Thin sections or "side-blow blade-flakes" (Voigt 1983:231–35, pl. 32c, g, i, fig. 111c–d) have been found in the upper levels at Jarmo (Hole 1983a: 247–48, table 10, fig. 122:1–10); the early Hassuna sites of Ali Agha (Braidwood et al. 1983:669); Telul-eth Thalathat (Fukai and Matsutani 1977:54, fig. 3:1–3); Umm Dabaghiyah (Kirkbride 1972:11, pl. XVII:3–5); and a series of sites lying just south of the Taurus, stretching from the Mosul area to Gritille on the Euphrates (Kirkbride 1972:11; Oates 1969:132, n. 33; Copeland 1979:254, 267–68, fig. 2:14, 16; Voigt, unpublished). Obsidian blades with steep lammelar flaking (Voigt 1983:236–37, pl. 33, fig. 111n–o) also occur at sites in the Zagros including both Aceramic and Samarran levels at Shimshara (Mortensen 1970:43, figs. 24d, 25f–h, 29a, e–f, 30–31, 36–37), the lower levels at Jarmo (Hole 1983a:241, n. 5, fig. 122:11, 13–21), and a large number of Aceramic Neolithic sites stretching across Anatolia from Çayönü ("backed blades," Redman 1982:42–44, fig. 2.14:1–2, 2.15:1–3, pl. 2.II:15–18) to Gritille (Voigt 1985:fig. 17s).

B. *The Hasanlu IX (Dalma) period* is known primarily from excavations at Dalma Tepe (Hamlin 1975), but also from Hajji Firuz and Pisdeli Tepes in Solduz (Voigt, in prep.; 1983:7–8, 17–18, figs. 4, 8) and from Tepe Seavan in the Mergavar Valley to the north of Ushnu (Solecki and Solecki 1973). At Pisdeli Tepe, several strata assigned to the Dalma period contain pottery that is transitional between typical Dalma wares and the succeeding Pisdeli ceramic industry (Voigt, in prep.).

Dalma material has been found all along the western side of the Urmia basin (see "Salmas" and "Urmia Plain"; Solecki and Solecki 1973; Kearton 1970). To the south, painted and impressed pottery very similar to that from Dalma Tepe has been recovered in the Kangavar Valley and designated as Godin X (see "Godin"; E. Henrickson 1985b), and survey data document the presence of the

Dalma assemblage at sites in the area between Solduz and Kangavar (Dyson 1967b:2955; Stein 1940, collections of the British Museum; Swiny 1975:79–81, fig. 1:4–8; Young 1966). Dalma Impressed Ware provides a chronological link to the Early Siahbid phase in the Kermanshah region, and perhaps to the Bayat phase in Deh Luran (q.v.; Wright 1981:fig. 10e).

Imports found at Dalma Tepe establish the chronological relationship between Hasanlu IX and sites to the west. Several sherds and one complete vessel are closely paralleled to Tepe Gawra XVI, or the Ubaid 3 period (Hamlin 1975:fig. 10:I; Tobler 1950:pl. LXXVII:b:13, 15). Independent parallels for the Dalma period in Kangavar also indicate an Ubaid 3 date (see "Godin").

C. *The Hasanlu VIII (Pisdeli) period* is defined by soundings at Pisdeli Tepe (Dyson and Young 1960; Young 1962), and is also known from Hajji Firuz and Hasanlu Tepes (Voigt 1983:8, 16–17, figs. 4, 8). An 8-m thick deposit at Pisdeli Tepe, and 6.5 m in the Hasanlu Well Sounding, suggests a long duration for this period. There are many parallels between the chaff-tempered Pisdeli Painted vessels and sherds from Gawra XIII–XII (Voigt, in prep.; e.g., Tobler 1950:pls. CXXVII:167–73, CXXXI:224, CXXXV:262–64, CXL:320), and a sealing showing a man with a shield(?) found eroded out of Hasanlu VIII deposits at Hajji Firuz Tepe is nearly identical to a stamp seal from Gawra XIA (Tobler 1950:pls. LXXXVIIIa:10, CLXII:77). Thus Pisdeli is equivalent to both Ubaid 4 and the Gawra or Early Uruk period in Mesopotamia. To the south, red-slipped fingertip-impressed sherds from Pisdeli contexts are paralleled in the Godin IX/Seh Gabi period in Kangavar (E. Henrickson 1983:196–98, figs. 52–54), and some Pisdeli Painted pottery is apparently related to the "Red, White, and Black Ware" characteristic of the Maran period in the Kermanshah region and Luristan (see "Mahidasht" and "Godin").

D. *The Hasanlu VII (Painted Orange Ware) period* is defined by excavations on the Citadel and in the Lower Town at Hasanlu Tepe (Dyson 1967b, 1969) and is also known from a tomb at Hajji Firuz Tepe (Voigt 1976:805–10, fig. 115). The period has been divided into phases VIIA–C based on changes in the ceramics found in the U22 sounding on the citadel (Dyson 1973b; Dyson and Pigott 1975:182). The ceramic industry includes Painted Orange Ware, a thin, grit-tempered ware that is sometimes decorated with black-painted geometric motifs or birds, and rare Burnished Gray Ware vessels.

Sherds of Painted Orange Ware have been found on the surface of sites in eastern Azerbaijan; one of these, Gol Tepe, has an area of ca. 12 ha (Tala'i 1984:figs. 1–2). A boundary between the northern and southern portions of the Urmia basin developed after the Pisdeli period, which dates no later than Gawra XI. In the Urmia Plain this division is represented first by Geoy M, a late Chalcolithic assemblege that can be correlated with Gawra XI–IX, and then by Geoy K, and Early Trans-Caucasian I and II occupation (see "Urmia Plain"). A small number of sherds testify to contacts between Hasanlu VII and Early Trans-Caucasian groups to the north: (1) At Hasanlu Tepe, a single sherd of Graphite-Burnished Black Ware with a "dimple" of Early Trans-Caucasian II–III type was found in a level assigned to Hasanlu VIIA–B; the sherd was eroded and could have been derived from an earlier context. (2) At Geoy Tepe, Hasanlu VII–like painted sherds occur in level K3, or Early Trans-Caucasian III context (Burton Brown 1951:fig. 12:1249). Although this scanty evidence cannot be used to determine the precise relationship between the Hasanlu and Early Trans-Caucasian sequence, it strongly suggests that Hasanlu VII is contemporary with the latter part of Geoy K or Early Trans-Caucasian (II)–III. The radiocarbon evidence supports this conclusion (see below). The recovery at Gol Tepe of a small number of burnished black sherds, some of which are incised, indicates an occupation dated to Yanik Early Bronze I or Early Trans-Caucasian II (Tala'i 1984:151, fig. 3: a–i). Given the evidence for the precedence of Yanik Early Bronze I over Hasanlu VII, it is possible that these incised Early Trans-Caucasian sherds represent an occupation at Gol Tepe predating the Hasanlu VII settlements in Solduz.

A date in the second half of the third millennium for Hasanlu VII is also indicated by parallels outside the region. Hasanlu VII shares some distinctive vessel forms with Early Dynastic III and Akkadian pottery in Mesopotamia. For example, jars with ovoid or "bag-shaped" bodies, straight necks, and everted beveled rims are found both at Hasanlu and in the Diyala (Dyson 1967b:fig. 1027, lower left; Delougaz 1952:pls. 185:C.556.540, 188:C.6566.540). The most common form of Hasanlu VII jar, with a globular body, strongly angled shoulder, and everted beveled rim, occurs in Akkadian levels at Nippur (M. Gibson, pers. comm. 1984) as well as at Godin in period III:5 (see "Godin"). Although the Godin III:5 painted designs are more diverse and intricate than those of Hasanlu VII, the motifs employed are similar; more important, the way in which designs are placed on jars is very close (Dyson 1967b:pl. 1483a; R. Henrickson 1984a:fig. 93:2, 5; Dyson 1967b:fig. 1027; R. Henrickson 1984a:fig. 92).

Northeastern Urmia Basin: The Yanik Sequence

Most of the archaeological information for this area comes from excavations at Yanik Tepe under the direction of Charles Burney (1962, 1964; Burney and Lang 1972), supplemented by surface surveys carried out by Stuart

Swiny (1975) and Hasan Tala'i (1984). Although the mountainous area around Ardebil has been surveyed, few sites predating the Iron Age were recorded (Burney 1979b; Ingraham and Summers 1979).

A. *The Yanik Late Neolithic period,* defined in Trench P on the small mound at Yanik Tepe (Burney 1964), is closely related to Hasanlu X or the Hajji Firuz period (Voigt 1983:95, 167–68, 204–5). Ceramic parallels link the Yanik Neolithic pottery with Hassuna/Samarra sites to the west and Sialk I_3 to the east (Burney 1964:56–57, pl. 15:3–4; Voigt 1983:167–68). Alabaster artifacts, including bangle fragments and a bowl, suggest a relationship with Zagros sites such as Jarmo, Sarab, and Shimshara. An alabaster head, probably from a figure modeled of clay or an organic material, is very similar to that of a seated male from Tell es-Sawwan level I (Burney 1964:57, pl. 15:11; Oates 1966:pl. 38; Voigt 1983:178). In general, the occupation at Yanik seems to be contemporary with that at Hajji Firuz; however, much of the excavated Yanik Neolithic sample may be earlier than the best-known Hajji Firuz phases (D–A). This tentative conclusion is based on the scarcity of painted pottery at Yanik and on the presence of simple intramural pit graves which at Hajji Firuz fall in the early part of the sequence (Burney 1964:56; Voigt 1983:70–71). The radiocarbon dates from Yanik and Hajji Firuz support this interpretation (see below).

B. *The Yanik Chalcolithic period* is defined by 9 m of deposit in Trench M, a deep sounding in the Main Mound at Yanik Tepe (Burney 1962, 1964). Burney stresses continuity within what must be a long time span, but also indicates that there are significant differences within the ceramic industry, with implications for chronology. A few sherds from the early levels identified as Dalma Painted and Dalma Impressed Ware place the beginning of this period contemporary with Hasanlu IX (Burney 1964:58; Burney and Lang 1972:37). The burnished Red-Slipped Ware that predominates in the Yanik Chalcolithic is paralleled in technology and vessel form by Pisdeli Red Ware. Also found in the latest Yanik levels were "finely burnished relatively thin wares" and painted pottery which Burney compares to that of the Pisdeli period, and one sherd is identified as a Pisdeli import (Burney 1962:137, pl. 43; 1964:58). Based on the published material, however, closer parallels for the Yanik Painted pottery are found at sites such as Geoy M (Burney 1962:pl. XLIII:10; Burton Brown 1951:fig. 7:1), Gawra XII (Tobler 1950:pl. CXXXIX:307), and Norşuntepe (Hauptmann 1976:fig. 50:8, 1979:fig. 30:10; see also "Urmia Plain"). A painted human figure with upraised arm and open hand from Yanik (Burney 1962:pl. XLIII:9) is similar to one from Gawra level X (Tobler 1950:pl. CXLV:398). Finally, Red-Slipped Ware "fruitstands" (Burney 1962:pl. XLIII:5) have analogues in Gawra XI–IX (Tobler 1950:pl. CXLVI:400–401). All of this evidence indicates that the later part of the Yanik Chalcolithic deposit postdates the Pisdeli period in Ushnu and Solduz, and is instead contemporary with Middle to Late Gawra material in northern Mesopotamia and Late Chalcolithic deposits in the Keban.

C. *The Yanik Early Bronze I period* is defined by nine major building levels containing round mud-brick buildings (Burney 1961:141–47, 1962:139–41, 1964:59). The assemblage is that of the Early Trans-Caucasian culture, found at sites throughout the Caucasus, eastern Anatolia, the Levant, and portions of western Iran (Burney and Lang 1972:43–85). Yanik Early Bronze I has been assigned to the Early Trans-Caucasian II period, contemporary with settlements such as Shengavit III in the Caucasus, Geoy K2 in the western Urmia Basin, and numerous sites in eastern Anatolia (Mellink, this vol., chap. 9). Early Trans-Caucasian I pottery is well burnished, and fired from red to black. The use of incised and white-filled geometric elements arranged in bands or long rectangular panels seems to be a local development in Iran, found not only in Yanik Early Bronze I, but also at settlements located along the eastern side of the Alvand alignment within the Zagros, the best known of which is Godin IV (Burney and Lang 1972:61–62; Young 1969:10, figs. 11–12; see "Godin").

D. *The Yanik Early Bronze II period* is defined by rectangular houses in Area J/K/L on the Main Mound at Yanik Tepe (Burney 1962:142–45, pls. XL, XLI:b–c, XLII: a–b, fig. 2). Within the ceramic industry, the plain burnished wares found in the latest levels with round houses continue into those with rectangular houses, indicating a gradual transition between the two periods (Burney 1962:142). Jar and bowl forms are similar to those in Early Bronze I, but a new element is the presence of pointed bases (Burney 1962:pl. XLIV:17–19).

The Yanik Early Bronze II pottery, which includes sherds with a metallic sheen produced through the application of graphite, is assigned to the Early Trans-Caucasian III period (Burney and Lang 1972:65–66). It is contemporary with the related sites of Geoy K.3 and Haftavan VII in the Urmia basin (Burney and Lang 1972:65–66), and thus by extension with Hasanlu VII and other "Painted Orange Ware" sites (see "Hasanlu"). Outside of Iran, Early Transcaucasian III sites include Kavatskhelebi B and Shengavit IV in the Soviet Union (Burney and Lang 1972:64–73), and "Early Bronze III" levels at sites in the Keban area of eastern Turkey (Mellink, this vol., chap. 9; Sagona 1984).

Northwest Urmia Basin: The Salmas Sequence

For the prehistoric period, the best-known area to the north of the lake is the Salmas Plain, surrounding the towns of Shahpur and Khoy. A major program of excavation was carried out at Haftavan Tepe under the direction of Charles Burney (1970a, 1970b, 1972, 1973, 1974, 1975, 1976a, 1976b, 1979a; Edwards 1983). As part of this research Regnar Kearton (1969, 1970) conducted a surface survey of the Salmas Valley. Surface surveys of the extreme northwestern part of the region by the German Archaeological Institute in Iran have provided additional information on the Early Bronze Age (Kleiss and Kroll 1975, 1979).

A. *The Neolithic period* is documented by the presence of thick-walled, poorly fired, chaff-tempered pottery on the surface of four sites (Kearton 1970:267, figs. 27–28). The technology employed, as well as painted motifs such as nested chevrons and diagonal lines below an annular band, links this industry to the Hajji Firuz period (Hasanlu X) in Ushnu and Solduz.

B. *The Early Chalcolithic period* is defined by surface material, painted pottery very similar to that of the Dalma period in Solduz (Kearton 1970:116, fig. 26:2, 5). Although only two impressed sherds are illustrated (Kearton 1970:fig. 26:1, 4), one is typical of the Dalma assemblage both in Solduz (Hamlin 1975:pl. IIa) and Kangavar (E. Henrickson 1983:fig. 50:3, 9; Young and Levine 1974:fig. 10:8).

C. *The Late Chalcolithic period* is again defined by surface material very similar to that of Hasanlu VIII in Solduz (Kearton 1970:112–13, figs. 23–24). Most of the painted ware illustrated by Kearton seems to date to the middle and later part of the Pisdeli sequence in Solduz; however, bowls decorated with scallops below the rim on the vessel interior are best paralleled in Geoy M (see "Urmia Plain"). The red-slipped and the burnished wares so typical of this period at sites to the south have not been reported in Salmas (Kearton 1970:112).

D. *The Haftavan VIII (Early Transcaucasian II) period* is defined by deposits in trench TT9 on the citadel mound at Haftavan Tepe (Burney 1974:102, 1976a:258–59). The settlement was made up of round structures similar to those of Yanik Tepe Early Bronze I (Burney 1975:150, fig. 1; 1976a:fig. 1; 1976b:157). This link is confirmed by the Haftavan VIII ceramics, which include a plain Burnished Gray Ware and some Graphite-Burnished Ware, decorated with "dimples" and Nakhichevan lugs. Burney, who excavated both sites, considers Haftavan VIII to be contemporary with the latest of the twelve levels assigned to Early Bronze I at Yanik Tepe (1975:150, 1976b:157).

E. *The Haftavan VII (Early Transcaucasian III) period* is defined by material from trenches on the citadel mound (Burney 1970a:164, 1970b:182, 1973, 1974). The ceramic industry is characterized by Graphite-Burnished Ware of the type found in Yanik Early Bronze II and at Early Trans-Caucasian sites in the Caucasus (Burney 1973:159; Burney and Lang 1972:66–67).

F. *Haftavan period VIC*, defined by a robbed-out building and pits in trench C2 at Haftavan Tepe (Burney 1976b:157; Edwards 1981:102), represents a stratigraphic and cultural break from Haftavan Period VII. It is characterized by rare sherds of incised ware, Brown-on-Buff Painted Ware and Black-on-Red Ware (Burney 1983:ix; Edwards 1983:12–13, figs. 10–15). Burney (1976b:157) has suggested a possible relationship between the Haftavan VIC Black-on-Red Ware and Hasanlu VII Painted Orange Ware (1973:159, 1976b:157) as well as a tie between Haftavan VIC and Godin III. However, vessel forms are different, and the painted designs of both Red-on-Black Ware and Brown-on-Buff Ware seem more closely related to the succeeding Haftavan VIB period than to sites in the south. Continuing relationships between Haftavan and areas to the north are indicated by the presence of sherds from a burnished black vessel with fine herringbone incision that is "typical of the Early Trans-Caucasian III period" (Edwards 1983:13, fig. 15:13) with parallels at Trialeti (Burney 1973:159).

The Urmia Plain Sequence

Along the western side of Lake Urmia lies a large flat plain, surrounding the town of Urmia. Two major mounds have been investigated: Geoy Tepe, by T. Burton Brown (1951); and Kordlar Tepe, by a team from the University of Innsbruck under the direction of Andreas Lippert (Kromer and Lippert 1976; Lippert 1976). At both sites the bulk of the excavated material dates to the Iron Age, and earlier periods are known only from limited exposures in deep soundings that did not reach virgin soil.

A. *The Chalcolithic period* is defined by level 1 of the Profile Cut at Kordlar Tepe, and by Geoy periods N and M. The published material from Kordlar (Kromer and Lippert 1976:80–81, pl. VI), as well as sherds collected from Kush Ali Tepe near Geoy, dates to the middle and late portion of the Pisdeli sequence in Ushnu-Solduz. Although little is known about Geoy N, sherds of a "well-polished red ware" may be related to Pisdeli Red Ware and/or the Yanik Chalcolithic Red Ware (Burton Brown 1951:16, fig. 5:674).

On typological grounds, Geoy M (Burton Brown 1951:17–33) is later than any of the Pisdeli material recovered from Ushnu-Solduz; moreover, although it may be derived from the Pisdeli tradition, the painted pottery from Geoy M seems to be part of a new ceramic assemblage that is found in "Late Chalcolithic" levels at sites in the Keban region of eastern Turkey, including Norşuntepe and Tepecik, as well as in the Gawra period in Mesopotamia. Shared items include open bowls with pinched rims, low ring bases, and painted scallops at the rim (Burton Brown 1951: fig. 4:43, 351, fig. 5:632, pls.

I:12, II:635, 623, 632, III:43; Tobler 1950:pls. CXXXIV:248–49); open bowls with incurved rims beveled to the inside, sometimes decorated with thick drips of paint descending from the rim (Burton Brown 1951:figs. 4:355, 5:634, 46, 1127, pl. II:634; Tobler 1950:pl. CXLIV:375, 383, from level X-A; Hauptmann 1972:pl. 71:5–6; Esin 1972:pl. 112:2); large jars or "pithoi" with short strongly everted necks and globular bodies, decorated with bands of crosshatched triangles on the shoulder and short vertical lines on the interior of the rim (Burton Brown 1951:fig. 7:1, 97, pls. I:11, III:97; Tobler 1950:pls. CXXXIX:307, CLII:525; Hauptmann 1976:pl. 50:8, 1979:pl. 30:10). A distinctive design element shared by Geoy M and Gawra XI-A is the use of rows or bands of squiggles as a painted motif (Burton Brown 1951:pl. I, fig. 4; Tobler 1950:pl. CXLI:339). Finally, a clay stamp seal impression from the top of Geoy M that portrays a stag with comblike horns above a caprine(?) has its closest parallels in Gawra XII and XI-A (Burton Brown 1951:pl. VIII:1646; Tobler 1950:pl. CLXVI:126–27).

B. *The Geoy K (Early Trans-Caucasian I–III) period* is defined by deposits at Geoy Tepe that have been divided into three phases based on absolute depth. The pottery is the best-published example of the Early Trans-Caucasian ceramic industry within Azerbaijan (Burton Brown 1951:34–62, figs. 7–12, pls. III–VII).

The earliest levels, Geoy K.1, apparently represent the initial occupation of the Urmia Basin by Early Trans-Caucasian I groups (Burney and Lang 1972:59; Sagona 1984:60–61). A small number of decorative techniques link this assemblage to sites in eastern Turkey. A checkerboard design incised on a potlid (Burton Brown 1951:pl. IV:35) is paralleled on bowls from Late Chalcolithic/Early Bronze I Tepecik (Esin 1970:168, pl. 15:1–2; 1976:115, pl. 72:2). A second lid from Geoy was decorated with a cylinder seal impression with hatched lozenges (Burton Brown 1951:pl. V:34); this is very similar to an impression on a jar found in an Early Bronze I context at Han Ibrahim Şah (Ertem 1974:pl. 61:5).

The pottery of Geoy K.2 and K.3, decorated only with round or lenticular "dimples" and in Geoy K.3 round or oval knobs on vessel bodies (Burton Brown 1951: pls. III:958, 39, 3, V:586, 342, VI:449, 385, VII), is dated to Early Trans-Caucasian II and III, contemporary with such closely related sites as Yanik Tepe Early Bronze Age I–II and Ḥaftavan periods VIII–VII (Burney 1975:150; Burney and Lang 1972:59; Sagona 1984:50–65).

Isolated sherds provide some evidence of contact between Geoy K and groups occupying the southern half of the Urmia Basin. Two that can be identified as Hasanlu VII painted ware were recovered from near the top of K.2 and from K.3 (Burton Brown 1951:fig. 12:1249/50; inventory no. 1251), and a rolled sherd of Graphite-Burnished Ware was found in a period VII deposit at Hasanlu.

Radiocarbon Evidence for Northwestern Iran

Calibrated radiocarbon determinations from the upper part of the Neolithic deposit at Hajji Firuz, and from comparable Late Neolithic levels at Yanik Tepe, all fall within the first half of the sixth millennium (table 2). Dates from earlier levels at Hajji Firuz and Baranu, which are beyond the range of the CRD tables, suggest that the initial colonization of the Urmia Basin took place approximately five hundred years earlier, or in the middle of the seventh millennium.

The next time range for which a cluster of absolute dates is available can be broadly termed the Middle and Late Chalcolithic. A consistent series of radiocarbon determinations which produced an average range of 4540–4405 B.C. (table 1) has been obtained from the Hasanlu VIII levels at Pisdeli, Hajji Firuz, and Kush Ali Tepes. Analysis of the individual dates suggests that the transition from Hasanlu IX to VIII took place in the first half of the fifth millennium, and that Hasanlu VIII/Pisdeli sites in Solduz may have been abandoned before 4000 B.C. Two dates for the Yanik Chalcolithic period suggest late fifth to early fourth millennium occupation (table 2).

Five dates for Yanik Early Bronze I firmly place this material within the latter part of the fourth millennium/first half of the third millennium. A single carbon sample for Geoy Tepe taken from the exposed side of Pit I within K.1 dates between 3365 to 2890 B.C. Given the range for Yanik Early Bronze I, the earlier part of the range seems more likely. A series of six dates from Hasanlu VII produced an average date of 2650–2415 B.C. (table 1); two dates for Yanik Early Bronze II which equates with Early Trans-Caucasian III also fall within the second half of the third millennium. A *terminus ante quem* of ca. 2000 B.C. for the Early Trans-Caucasian III/Hasanlu VII horizon is provided by dates for early Hasanlu VI deposits excavated at Dinkha Tepe (Hamlin 1974a:table I).

Seven

Central Asia (Western Turkestan): Neolithic to the Early Iron Age

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Outline

The Neolithic Period
The Neolithic of Southern Turkmenistan
The Early Bronze Age of Southern Turkmenistan
The Middle Bronze Age or "Urban Phase"
Terminal Middle Bronze or Kelleli Phase
Initial Late Bronze or Gonur Phase, ca. 2100–1800 B.C.
Terminal Late Bronze or Togolok Phase, ca. 1800–1500 B.C.
Conclusion: Transition to the Iron Age
Addenda

The area covered in this chapter stretches from the Caspian Sea in the west to the Fergana Valley in the east and from the Aral Sea in the north to the Hindu Kush and Atrek Valley of northeastern Iran in the south. It is simply the vast area of interior drainage formed by the streams draining the Kopet Dagh and northern Hindu Kush mountains and by the Atrek, Tedjen, Murghab, Amu Darya, Zeravshan, and Syr Darya rivers and their tributaries (fig. 1). Today, western Turkestan is divided among three nation-states: Iran; Afghanistan; and the republics of Turkmenistan, Uzbekistan, Tadjikistan, and part of Kirghizia in the Soviet Union. The boundaries of prehistoric culture areas and modern political borders rarely coincide, but the existence of the latter usually implies a different history of archaeological investigations and research for regions separated by the borders, and this fact affects the interpretation of the archaeological evidence or, in this case, the attempt to make a chronological reconstruction. Specifically, little prehistoric work has been undertaken in Iranian Khorassan; while northern Afghanistan is known through the efforts of American and, particularly, French and Soviet archaeologists, important regions, such as the foothills of the northwestern Hindu Kush, remain ill explored. Consequently, most of the data summarized in this chapter come from Soviet central Asia, particularly southern Turkmenistan, where the most detailed prehistoric sequences have been established.

The land itself consists of largely uninhabited deserts (Kara Kum and Kyzyl Kum, in particular), rugged mountain ranges, lowland alluvial plains, watered piedmont zones, and intermontane valleys. Important rivers, such as the Amu Darya and Zeravshan, that rise in the high eastern mountain ranges are fed largely by melting snows, while those to the west, such as the Murghab, Tedjen, or numerous streams of the Kopet Dagh, rely more on rainfall or, in some cases, tap groundwater sources (Dolukhanov 1981). Southern central Asia is a landlocked basin with a sharply continental climate and is very arid, particularly throughout its low-lying plains. While Soviet specialists disagree on the extent of environmental change during the Holocene (contrast Lisitsina 1978:189–93 with Vinogradov and Mamedov 1975:234–55), a longer term pattern of general desiccation is clear, and Neolithic archaeological remains in the inner Kyzyl Kum and Bronze Age settlements in an area formerly watered by the lower Murghab suggest that waters at least flowed farther into the deserts during the period of our concern, ca. 6500–1500 B.C., than they do today. Part of the retraction of rivers terminating in the desert was human-induced in the sense that the establish-

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